# 5.0 INVENTORY OF GOVERNMENTAL UNITS

Numerous federal, state, regional, and local governmental units are responsible for environmental and natural resource regulation, management, and planning within the Estero Bay Watershed. The following inventory and description of governmental units was prepared with the objective of outlining and describing the degree of agency involvement and responsibilities relative to water and habitat resource activities and related issues within the project study area.

This chapter includes a listing of the legal authority (or citation) and a description of the activities of each federal, state, and regional governmental unit inventoried. Local government programs often have very similar levels of authority, and thus are discussed with regard to programs identified in their comprehensive plans. The governmental units reviewed in this section are listed in Table 5-1. Governmental units were categorized as follows:

- Federal Programs,
- State Programs,
- Regional Programs,
- Special Districts, and
- Local Programs.

The inventory of governmental units was developed using information compiled in previous reports, including the recent "Base Programs Analysis - Description of the Existing Laws, Policy, and Resource Management Structure in the Greater Charlotte Harbor Watershed" developed in 1998 by the Southwest Florida Regional Planning Council for the Charlotte Harbor National Estuary Program. Much of the information in this section was taken directly, in whole or part, from the relevant material contained within the comprehensive SWFRPC "Base Programs Analysis". Upon completion of the inventory, key personnel from selected local programs were contacted to clarify information and to provide input into the evaluation of the effectiveness of governmental units.

A matrix of watershed activities and governmental units was created to assess the effectiveness of governmental units in the project area. Categories of governmental involvement were assigned to identified watershed activities based on: 1) the lists of legal authority and the governmental unit descriptions developed for this report; 2) information provided by key agency personnel; and 3) other additional information sources.

Categories of governmental involvement used in this assessment were:

- Enforcement/Regulation,
- Advisory/Review,
- Planning/Policy Development, and
- Research/Education.

Review and summary of the evaluation matrix, combined with the results of other governmental assessments pertinent to the project area, provided a means to assess agency and authority jurisdiction and responsibility with regard to the identified watershed activities and issues.

**Table 5-1. Governmental units in the Estero Bay Watershed study area.**

| GOVERNMENTAL UNITS | ACRONYM |
|---|---|
| **Federal** | |
| U.S. Environmental Protection Agency | EPA |
| Federal Emergency Management Agency | FEMA |
| U.S. Army Corps of Engineers | COE |
| U.S. Department of Interior | DOI |
| - U.S. Geological Survey | USGS |
| - U.S. Fish and Wildlife Service | FWS |
| U.S. Department of Commerce | DC |
| - National Marine Fisheries Service | NMFS |
| U.S. Coast Guard | CG |
| U.S.D.A. Natural Resources Conservation Service | NRCS |
| **State** | |
| Florida Department of Agriculture and Consumer Services | DACS |
| Florida Department of Community Affairs | DCA |
| Florida Department of Environmental Protection | DEP |
| Florida Department of Health | DOH |
| Florida Department of Transportation | DOT |
| Florida Game and Freshwater Fish Commission | GFWFC |
| Florida West Coast Inland Navigation District | WCIND |
| **Regional Agencies** | |
| South Florida Water Management District | SFWMD |
| Southwest Florida Regional Planning Council | SWRPC |
| Big Cypress Basin Board | BCBB |
| **Local** | |
| Lee County | |
| Hendry County | |
| Collier County | |
| City of Fort Myers | |
| Town of Fort Myers Beach | |
| **Special Districts** | |
| Water Control and Drainage Districts | WCDD |

## 5.1 Federal Agencies

The general governance structure of the United States is dictated by the U.S. Constitution. The Constitution divides our government into three branches; the Executive (President), the Legislative (Congress), and the Judiciary (Supreme Court). Congress, composed of two houses called the Senate and Representatives, is the supreme budget and legislative entity. The Courts interpret the law and provide adjudication. The President implements the law and the constitutional requirements of the office. There is nothing in the Constitution that provides explicit responsibility for environmental quality, but through time the general welfare provisions of the Constitution have been legislatively defined and judicially determined to encompass environmental conservation or protection.

Laws enacted by Congress are contained in the *U.S. Code of Laws*. When Executive Office interpretation of these laws occurs, it must be provided in written form and is ultimately contained in the *Code of Federal Regulations*. The roles of federal agencies are summarized in Table 5-2. Their specific statutory citation are found in succeeding sections.

**Table 5-2. Federal Agency Roles**.

| AGENCY | ROLE | | | | | |
|---|---|---|---|---|---|---|
| | **Regulatory** | **Review** | **Planning** | **Research** | **Funding** | **Ownership** |
| USEPA | X | X | X | X | X | |
| DOA | X | | | X | X | |
| DOC | | X | X | X | X | |
| DOD / ACOE | X | | X | | X | X |
| HUD | | | X | | X | |
| DOI | | | X | X | | X |
| DOT | X | | | | X | |
| FEMA | X | | X | X | X | |

The Executive Branch is the primary implementation agency. The President appoints all Cabinet Officers, each of whom heads a department of government, and the heads of all executive but non-cabinet agencies, subject to Senate confirmation. These agencies are the vehicle by which environmental programs within the United States are initiated.

### 5.1.1 Executive Agencies

The role of several executive agencies responsible for environmental and natural resource regulation, management, and planning within the Estero Bay Watershed are described below.

#### 5.1.1.1 Environmental Protection Agency (EPA)

The Environmental Protection Agency (EPA) was created in 1970, as an entity independent of any other executive branch agency, to facilitate effective governmental coordination of actions that occur on behalf of the environment. The Agency's mission is to safeguard the health and welfare of the American people by protecting the environment and improving environmental quality. Its chief officer is the Administrator, and it is organized with nine assistant administrators over substantive matters. EPA is organized geographically into ten regions with Florida located in Region 4, headquartered in Atlanta, Georgia.

EPA seeks to protect public health and safety and to improve the quality of the environment through the development and implementation of discovery, investigation, containment, and control programs. The Agency integrates research, monitoring, and standard-setting activities to control pollution of water and air.

EPA conducts regulatory and planning programs in accordance with a wide range of environmental legislation. The Agency's role is generally one of partnership with the states and other federal agencies on actions impacting surface and ground waters, air quality, and waste management. EPA's major enabling legislation consists of the following:

- Clean Water Act of 1987 or *CWA*, (amendments to *1972 Federal Water Pollution Control Act of 1972*),
- *Safe Drinking Water Act of 1986* (1987 and 1996 amendments),
- *Marine Protection, Research and Sanctuaries Act of 1972* or *MPRSA*, (most recently amended by the *Water Resources' Development Act of 1992*),
- *National Environmental Policy Act of 1969* or *NEPA*,
- *Resource Conservation and Recovery Act of 1976* or *RCRA* (1984 amendments),
- *"Superfund" Amendments and Reauthorization Act of 1986* or *SARA*,
- Toxic *Substances Control Act of 1976*,
- *Coastal Zone Management Act of 1972* (reauthorization amendments of 1990),
- *Clean Air Act of 1970* (1977 and 1990 amendments),
- *Federal Insecticide, Fungicide and Rodenticide Act of 1947* (1972 amendments), and
- *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*

The EPA is responsible for implementing the *Federal Water Pollution Control Act of 1972* (Clean Water Act) created to restore and maintain chemical, physical, and biological integrity of the

Nation's waters. The Act's goals included the elimination of pollutant discharges into navigable waters by 1985; the prohibition of toxic pollutant discharges in toxic amounts, an interim goal of attaining water quality standards for recreation and propagation of fish, shellfish and wildlife by 1983; and the establishment of a federal financial assistance policy to construct publicly owned waste treatment works.

*The Water Quality Act of 1987* amended the Clean Water Act and promulgated new guidelines and compliance deadlines as well as establishing the National Estuary Program.

Regulatory provisions of the Clean Water and Water Quality Acts emphasized surface water quality improvement through construction and operation of sewage treatment plants, reduction of industrial and municipal discharges, control of nonpoint source and toxic pollution, elimination of oil or hazardous substance discharge, and dredge and fill discharge permitting.

*The Resource Conservation and Recovery Act of 1976* was created to reduce waste and conserve energy and natural resources and to reduce or eliminate hazardous waste generation. *The Superfund Amendments and Reauthorization Act of 1986* serves to fund the clean-up of significant hazardous waste release sites.

**National Environmental Policy Act**

The *National Environmental Policy Act (NEPA) of 1970* was enacted to ensure that federal agencies consider the environmental impacts of their activities and achieve a balance between society's needs and environmental protection. The Environmental Protection Agency's (EPA) role under NEPA has traditionally been to document project environmental impacts, explore project alternatives, involve the public in decision-making processes, and recommend mitigation. An additional EPA function under *NEPA* and *Section 309 of the Clean Air Act* is to review and provide comment on the environmental assessments and environmental impact statements for projects developed by other federal agencies (such as construction projects for dams, highways, and power plants, dredging projects, resource extraction projects, and federal land use projects).

**Nonpoint Source Pollution Control**

The federal nonpoint program uses a nonregulatory approach to direct states to develop nonpoint source (NPS) management programs. EPA's nonpoint source (NPS) staff provides administrative oversight on state management plans to ensure that the requirements of *Section 319* of the *Clean Water Act* (CWA) are met. NPS staff members also administer the EPA's nonpoint grant program and provide technical assistance to each state, upon request.

*Section 6217* of the *Federal Coastal Zone Management Act* (CZMA) amendments of 1990 requires all states with federally-approved Coastal Zone Management Programs to develop and submit Coastal Nonpoint Pollution Control (CNPC) programs to EPA and the National Oceanic and Atmospheric Administration (NOAA) for approval. These CNPC programs must contain a set of economically achievable and enforceable "management measures" that (to the greatest degree possible) lead to a contaminant reduction in nonpoint sources of pollution. Failure of a state to comply with the federal mandate may jeopardize up to 30 percent of their funding under *Section 306 of CZMA* and *Section 319 of CWA*. The state and EPA's bioassessment efforts should lead to water quality standards as well as standards for marine habitats. *Section 6217* also requires local governments to identify, develop, and implement pollution control measures. The Coastal Programs and Surface Water Quality Grants Section of Region 4 administers the Nonpoint Source Program. The three primary duties of EPA's nonpoint staff are to (1) oversee all state NPS programs in Region 4; (2) administer the *Section 319(h)* grants program (to implement individual state nonpoint programs); and, (3) assist states in the development and implementation of nonpoint source management programs.

**National Pollutant Discharge Elimination System (NPDES)**

The *Federal Clean Water Act* authorizes EPA to regulate the wastewater discharges from municipal and industrial facilities through the National Pollutant Discharge Elimination System (NPDES) program. The act requires all facilities discharging into U.S. surface waters to obtain NPDES permits. These permits determine the levels of contaminant allowed in each facility's effluent. Contaminant levels are established by either industry-wide, "technology based" criteria or stream-specific "water quality based" standards (established by the states to protect the uses that they have designated for their streams).

EPA's Water Permits and Enforcement Branch has responsibility for permitting domestic and industrial facilities that discharge wastewater into the oceans, territorial seas, or marine waters of the U.S. and enforcing all of these permits. Domestic and industrial NPDES permits are required of all surface water dischargers. This branch of EPA is also responsible for permitting and enforcing stormwater discharges from large and medium municipal storm sewer systems.

In the 1987 amendments to the *Clean Water Act (CWA, P.L.100-4),* Congress established the approach to be used by EPA and delegated state pollution control agencies to control pollutant loadings from urban stormwater. *Section 402(p)* of the amendments outlined a permitting strategy to be used to regulate stormwater discharges. Additionally, *Section 319* outlines an overall approach for states to deal with nonpoint source pollution.

*Section 402(p)(1)* provides that EPA or states with an approved NPDES program could not require a permit for certain stormwater discharges until October 1, 1992, except for stormwater discharges listed under *Section 402(p)(2).* This section lists five types of stormwater discharges, which were required to obtain a permit prior to October 1, 1992: (1) A discharge with respect to which a permit has been issued prior to February 4, 1987; (2) A discharge associated with industrial activity; (3) A discharge from a municipal separate storm sewer system (MS4) serving a population of 250,000 or more; (4) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more, but less than 250,000; or, (5) A discharge for which the Administrator or the state, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States.

The control of stormwater through the permitting program generally follows a three step process: (1) describe or define the existing system, from both an engineering and institutional perspective; (2) develop control or management programs, including an implementation schedule for reducing pollutant loadings; and, (3) implement the control program according to the approved schedule in the issued permit.

The EPA, Region IV began active implementation of the stormwater regulations for the State of Florida following the final rule making in November of 1990. To date, 16 MS4 permits covering some 75 municipalities in total for the State of Florida have been issued by the EPA. With assistance from EPA, delegated states are concentrating efforts to issue and implement permits covering municipalities.

EPA, Region IV has prioritized the issuance of permits for all remaining Phase I MS4s identified in the 1990 census records. In addition, EPA is in the process of meeting with municipalities and finalizing comprehensive monitoring programs in the MS4 permits already issued. Through cooperative negotiating during the development, public notice, and issuance of the Florida MS4 permits, EPA, the State, and the regulated MS4s have been able to issue comprehensive stormwater permits that adequately address public concerns while meeting the overall requirements of the *Clean Water Act*.

**Drinking Water and Ground Water Protection**

**Safe Drinking Water Act:** The 1996 amendments to the *Safe Drinking Water Act* (SDWA) increased EPA and the state's roles in protecting the public's drinking water. The original *Safe Drinking Water Act* established roles in protecting drinking water from contamination. The Sole Source Aquifer program provided for designation of "sole source aquifers" and the review of federal financially assisted projects with those designations.

The act required development of drinking water standards and established new treatment requirements for water systems. It also established the wellhead protection program, which is designed to prevent contamination of underground sources of drinking water. The 1996 amendments furthered that concept by establishing the Source Water Protection Program, which is designed to prevent contamination of all sources of drinking water.

**Underground Injection Control:** EPA Underground Injection Control (UIC) staff regulate and assist states in managing the injection of fluids into wells in order to prevent endangering drinking water sources. The *Safe Drinking Water Act*, Part C provides legislative authority for these controls.

**Underground Storage Tanks:** The Underground Storage Tanks program regulates underground storage tanks (UST) to prevent contamination of current and potential future drinking water sources. Subtitle I of the *Resource Conservation and Recovery Act* (RCRA) provides the legislative authority for these regulations.

**Resource Conservation and Recovery Act (RCRA)**

*The Resource Conservation and Recovery Act of 1976* focuses on hazardous waste management (Subtitle C) and underground storage tank control (Subtitle I). All of Environmental Protection Agency's RCRA staff activities are funded from the general EPA, Region 4 operating budget.

**Subtitle C:** The intent of Subtitle C is to ensure that hazardous waste is managed to protect human health and the environment. It provides for management of hazardous waste from its initial generation to final disposal. Subtitle C "cradle to grave" regulations cover the generation, transportation, treatment, storage, and disposal of hazardous waste.

The *Hazardous and Solid Waste Amendments (HSWA) of 1984* authorize EPA to require corrective action for past releases of hazardous substances from waste management facilities. The State of Florida administers the base RCRA program, while EPA is responsible for implementation of the correction provisions of HSWA.

**Subtitle I:** Subtitle I is meant to ensure that underground storage tanks (USTs) are designed, installed, and operated in a manner to prevent releases from occurring. It sets out cleaning requirements to be instituted in case of a release. The State of Florida is responsible for administering the majority of this program within the state.

**Marine Sanitation Devices**

States may prohibit discharge of sewage from all vessels for the purpose of preventing the discharge of untreated or inadequately treated sewage into or upon navigable waters. EPA establishes performance criteria for Marine Sanitation Devices (pursuant to *Section 312 of CWA*). Prior to enacting marine sanitation regulations or programs, each state must submit an application to EPA for approval. The U.S. Coast Guard is responsible for enforcing these criteria.

**Pretreatment**

EPA's pretreatment program assists Publicly Owned Treatment Works (POTW) in controlling industrial discharges to their system. The program protects the treatment plants and their sludge, and prevents untreated pollutants from passing through a POTW. EPA regulations prescribe pretreatment standards for industrial wastes (including effluent criteria for identified pollutants), in accordance with the *Clean Water Act of 1997* (which amended the *Federal Water Pollution Control Act* of 1972).

**Superfund (CERCLA)**

The *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) *of 1980*, also known as *"Superfund,"* authorized the Environmental Protection Agency to clean up those sites where hazardous substances have been disposed without proper regard for the consequence to the environment or public health. Most of this money goes to funding government directed cleanup through emergency removal actions in actual emergencies or long term remedial actions for sites posing risks to public health or the environment. The *"Superfund" Amendments and Reauthorization Act (SARA) of 1986* provided a five year extension to CERCLA.

Program responsibilities include: (1) identifying sites where hazardous substances have been or might have been released into the environment; (2) ensuring that the sites are cleaned by responsible parties or the government; (3) evaluating damages to natural resources; and, (4) developing claim procedures for parties who have cleaned up sites or spent money to restore natural resources. The program focuses on remediation of inactive sites.

Preliminary site assessments determine if sites qualify for inclusion on the National Priority List (NPL) and cleanup under Superfund. Sites on this list are those determined to have: (1) the greatest hazard based on the type, quantities, and toxicity of waste present; (2) the number of people potentially exposed; (3) the likely pathways for exposure; (4) the importance and vulnerability of the underlying aquifers; and, (5) other factors.

***Community-Right-to-Know Legislation:*** In 1986, Congress passed the *Emergency Planning and Community Right-to-Know-Act* (EPCRA), also known as Title III of the *1986 "Superfund" Amendments and Reauthorization Act* (SARA). Section 313 of Title III required certain manufacturers to submit annual reports documenting amounts of toxic chemicals their facility releases into the environment either routinely or as a result of accidents. The EPA supplies this toxic inventory data to government officials and the public (to assist them in planning for toxic emergencies).

Every community in the United States must be part of a comprehensive emergency plan. EPA has collaborated with NOAA to develop the "Computer-Aided Management of Emergency Operations" (CAMEO) program to assist emergency planners. This data and software provides local and state governments with a way to store information submitted by facilities, conduct hazards analyses, map hazards in their community as part of the planning process, and store information on the properties and health risks posed by chemicals in their area.

EPA and the U.S. Federal Emergency Management Agency (FEMA) provide technical assistance to local and state government emergency planning commissions in the form of guidance manuals, chemical profiles, workshops, and other technical assistance. EPA provides on-site emergency response to large toxic spills (such as train derailments involving hazardous materials, major tank truck accidents involving toxic chemicals, and large industrial accidents involving hazardous chemicals). EPA officials coordinate on-site with local officials and other entities, but have authority to take charge where local officials are unable or unwilling to handle the problem. The U.S. Coast Guard is responsible for reacting to hazardous chemical spills in coastal waters.

**Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**

The *Federal Insecticide, Fungicide and Rodenticide Act* charges EPA with regulating the manufacture, distribution, and use of pesticides in the U.S. EPA provides Florida with support and oversight in enforcement and pesticide applicator certification and training programs.

**Toxic Substances Control Act of 1976**

The *Toxic Substances Control Act* of 1976 protects human health and the environment by developing data on chemical substances and mixtures and regulating those substances that present an unreasonable risk.

**Environmental Monitoring and Assessment Program (EMAP)**

EPA's Office of Research and Development administers the Environmental Monitoring and Assessment Program. EMAP is a nationwide, interagency environmental research, monitoring, and assessment program that focuses on seven major ecological resource categories (including estuaries and wetlands) to determine environmental health. This program generates large-scale, regional information designed for comparative studies.

**The *Clean Air Act* (as amended in 1990)**

In response to mounting information indicating that air pollution contributes significantly to water pollution, Congress included *Section 112(m)*, referred to as the Great Waters Program, in the *Clean Air Act*, as amended in 1990. The purpose of the Great Waters Program is to evaluate the atmospheric deposition of air pollutants to the Great Lakes, Lake Champlain, Chesapeake Bay, and coastal waters. The act requires a biannual report to Congress which should include information on the contribution of atmospheric deposition to pollutant loadings, the environmental or public health effects of such pollution, the source or sources of such pollution, and a description of any regulatory revisions under applicable Federal laws to assure protection of human health and the environment.

**Wetlands (Section 404, "Dredge and Fill")**

*Section 404* of the federal *Clean Water Act* (CWA) directs the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (ACOE) to regulate activities resulting in deposition of dredged or fill material in U.S. waters. ACOE issues permits for these activities, based on EPA guidelines. The EPA Region 4, Wetlands Section staff review and comment on all dredge and fill permit applications. EPA considers the impact of proposed dredge and fill activities on municipal water supplies, shellfish beds, fishery areas, wildlife, and recreation areas. *Section 309 of the CWA* gives EPA the power to take enforcement actions on permitted discharges. EPA can veto unacceptable reviews (pursuant to *Section 404© of the CWA*). EPA Region 4 also has the authority to fund Advance Identification of Wetland studies and provides wetlands support to the states through the State Wetland Grant Program.

EPA manages disposal of dredge materials by designating and monitoring disposal sites. EPA has developed disposal guidelines pursuant to *Section 404(b)(1).* These guidelines are subject to occasional revision.

**Charlotte Harbor National Estuary Program (CHNEP**)

The National Estuary Program is administered within the EPA under the Assistant Administrator for Water. The National Estuary Program was established by Congress as part of the Water Quality Act of 1987 in recognition of the need to protect the nation's estuaries threatened by pollution, development, or overuse. The Charlotte Harbor estuarine system was declared an "Estuary of National Significance" by nomination of the Governor's office in October 1995. A conference agreement in 1996 initiated the CHNEP with designation by the administrator of the U.S. EPA and the signatures of all management conference members. The jurisdiction of the CHNEP extends along the southwest coast of Florida, including its associated watershed areas from Venice in Sarasota County south to the southern end of Estero Bay in Lee County.

The CHNEP will culminate in a Comprehensive Conservation and Management Plan (CCMP) which will include watershed management actions for all basins within the Charlotte Harbor estuarine system, including the Estero Bay Watershed. The CHNEP management plans will likely recommend priority corrective actions and compliance schedules which address both point and nonpoint pollution sources. Examples include development of toxicity based standards, development of water quality-based standards for significant point sources, and development of best management practices for nonpoint sources of pollution.

#### 5.1.1.2 Department of Defense (DOD)

**U. S. Army Corps of Engineers (COE)**

The Department of Defense contains the Department of the Army, which is the parent agency of the Army Corps of Engineers (ACOE or Corps), the agency responsible for marine and aquatic improvements within the United States. Such improvements for maritime or riverine navigation require Corps approval and funding is often provided for such projects by Congress through the Corps. The authority for such improvements has been expanded through time to include flood control (coastal or riverine), water supply development, and recreational attributes that can be combined with navigation improvements. The Corps now has a major permit authority role and can include environmental values as a reason to approve, initiate, or deny activities within federal jurisdiction.

The Corps' early main purposes were ensuring inland waters remained navigable and that the public had reasonable protection for lives and property from flooding. The South Florida Water Management District received the impetus for their flood control role from being the sponsors for Corps projects. The Corps also funds beach and inlet restoration and maintenance projects. The Corps authority to regulate wetlands and other water bodies is primarily derived from statutes of the Rivers and Harbors Act and the Clean Water Act:

**The Rivers and Harbors Act (RHA) of 1899, 33 U.S.C. §§401-413 (1982)** The RHA requires consent of Congress (or consent of the State for navigable waters wholly within a state's limits) to construct a bridge, causeway, dam, or dike over any navigable water of the United States. Permits must be obtained from the COE for dams and dikes, for dredging and filling, or for construction of wharfs, piers, breakwaters, jetties, and any other obstruction to the "navigable capacity" of waters of the United States. A COE permit is also required for activities which may "alter or modify the course, location, condition or capacity" of any navigable water.

**Section 404 of the Clean Water Act (CWA), 33 U.S.C. §§1251-1376 (1982)**The CWA was passed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The COE is responsible for restoration and maintenance of navigable waters defined as "waters of the United States."

**Program: Section 404 Program** - In 1972, Congress enacted the *Federal Water Pollution Control Act Amendments*, currently known as the *Clean Water Act (CWA). Section 404* of the act regulates discharge of dredged and fill materials into waters of the United States including wetlands. The goal of the *Section 404* program is to ensure those projects requiring dredge or fill activities minimize environmental impacts and meet federal water quality standards and requirements. While *Section 404* is predicated on the maintenance of water quality standards, not the preservation of habitat, it has come to be used as one of the primary federal measures for minimizing impacts to the hydrological patterns of ecosystems and in protecting wetlands. Services provided by EPA to the Corps include technical guidance, permit review, some enforcement actions, and the EPA has authority to prevent the issuance of (e.g., veto power) 404 permits. Other agencies providing services include the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, who provide review and consultation on 404 permits.

Several activities are exempt from 404 requirements. These include: ongoing farming, silviculture, or ranching activities; maintenance of currently serviceable structures such as dikes, dams, or levees; construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches; and construction of temporary sedimentation basins on construction sites, and farm and forest roads.

All applications for *Section 404* individual permits are open for public review and comment. Any citizen or group may request to be included on the ACOE mailing list to receive public notices and if public interest in a particular case is strong, the ACOE may hold public hearings. Although *Section 404* decisions may not be appealed, there is an opportunity to file a citizen suit.

**Program: Section 404 Individual and General Permits** - The Army Corps of Engineers (ACOE) issues two types of *Section 404* permits: individual and general. The Corps requires individual permits for all projects involving wetlands. An application for an individual permit triggers a detailed review of the specific project. Smaller projects may qualify for a general permit. General permits are issued for certain types of projects on a regional or national level, and in many cases do not have reporting requirements. In Florida, general permits have been issued by the ACOE for such activities as constructing and repairing boat ramps, docks, piers, and jetties; emergency construction of primary dunes; construction and repair of bridges; and installation of utility lines. A "nationwide permit" is a type of general permit that covers common or standard types of activity such as fishing with pound nets and crab pots, installation of tide gages and buoys, bank stabilization, construction of seawalls for single-family lots in canal subdivisions, or construction of minor road crossings. In regard to wetland protection, the most important nationwide permit is Nationwide Permit 26. This permit allows the ACOE to authorize any project involving less than ten acres of wetlands in areas above the headwaters point on a stream or in isolated wetlands. Under Nationwide Permit 26, the Army Corps of Engineers requires that applicants provide pre-discharge notification. In general, no notification or permit is required from the ACOE for projects of less than one acre. However, in areas above the headwaters point on a stream or in isolated wetlands, any activity above 1/3 of an acre must receive 401 certification concurrence from the certifying state agency, stating that the activity meets state Water Quality standards. The Nationwide Permit 26 is currently under revision.

**Program: *Section 10, Rivers and Harbors Act*** - The *Rivers and Harbors Act* was enacted in 1899. Section 10 of this Act forbids any excavation or construction in "navigable waters" of the United States without a permit from the Army Corps of Engineers (ACOE). In 1970, the *Rivers and Harbors Act* was first legally interpreted to include "wetlands" as "navigable waters." The *Rivers and Harbors Act* authorizes the ACOE's three major civil works programs to receive appropriations from Congress. These three programs include the General Investigations Study Program, the Construction Program, and the Operations and Maintenance Program.

- The **General Investigations Study Program** allows for the evaluation of water resource problems and develops feasibility reports that are introduced to Congress to provide funding for civil works projects.

- The **Construction Program** provides the funding, design, and physical construction of Army Corps of Engineers' civil works projects.

- The **Operations and Maintenance Program** oversees the operation and funding for the maintenance dredging of the Atlantic Intracoastal Waterway as well as other harbors and rivers.

**Program: Section 401 Certification** - Applicants to the U.S. Army Corps of Engineers (ACOE) for 404 permits (for dredge or fill activities within waters of ACOE jurisdiction) must also apply for State 401 certification. *Section 401 of the Clean Water Act* requires that any party applying for a federal permit to conduct an activity that may result in the discharge of a pollutant into U.S. waters must obtain certification from the state in which the discharge originates. This "401" certification must declare that any discharge will comply with applicable state effluent limitations and water quality standards. In Florida, 401 Water Quality Certificates are issued by the Department of Environmental Protection (FDEP). ACOE has the opportunity to review each permit application and to grant or deny 404 dredge and fill authority. Any permit issued by the ACOE must comply with *Section 7 of the Endangered Species Act*.

#### 5.1.1.3 Department of Agriculture (DOA)

The Department of Agriculture is the sponsoring agency of a host of programs that have been incorporated into state and local programs. These include rural housing assistance, rural water and sewerage programs, state agricultural colleges (University of Florida), soil and water conservation programs, forestry planting programs, and general agricultural best land and water use practices.

#### 5.1.1.4 Department of Commerce (DOC)

The Department of Commerce contains the National Oceanic and Atmospheric Administration (NOAA), which is the host agency for the National Marine Fisheries Service, as well as the nation's coastal zone management program. In addition, NOAA is contains the National Weather Service.

**National Marine Fisheries Service (NMFS)**
The National Marine Fisheries Service conducts a number of importance programs dealing with coastal and estuarine resources. These include:

- The Statistics Division - which maintains information on both recreational and commercial saltwater fisheries and associated trade.
- The Office of Protected Resources - which regulates fisheries resources.
- The Habitat Restoration Center - which administers coastal and estuarine habitat restoration programs.

Enabling legislation for such activities are included in:

*Fisheries Conservation and Management Act ( Magnuson Act) of 1976*
*Fish and Wildlife Coordination Act*

The FCMA defined U.S. marine management jurisdiction to include offshore waters within 200 miles of the shoreline and created eight Fishery Management Councils for the purpose of preparing Fishery Management Plans for selected species. Each NMFS Regional Director is the primary federal representative on each Council; other members include state fish and wildlife directors and private citizens appointed by state governors and the Secretary of Commerce. The 1986 amendments to the FCMA required that management plans include habitat information and potential effects on species from habitat changes. The 1986 amendments also authorized the eight regional fishery management councils to recommend habitat protection measures for ongoing and proposed federal and state activities.

The NMFS is the branch of NOAA that is, and can be, most directly involved in activities in the Estero Bay. The Fish and Wildlife Coordination Act authorizes the NMFS to evaluate developments proposed by the COE or other federal agencies that might affect the waters of the United States. The Habitat Conservation Program of the NMFS reviews federal permit applications for dredge and fill, energy exploration, wastewater discharge, and other pollution sources. Each NMFS regional office has a Habitat Conservation Division (HCD), which has the ability to comment on permits. Although the HCD does not have permitting authority, the HCD staff can recommend that controversial issues be further reviewed on a "higher level" such as from the COE district office to a regional office.

The NMFS is involved with several water resource protection and enhancement programs. The HCD staff and the COE have developed and implemented a program for creating and restoring coastal habitats. Other NMFS- and NOAA-supported programs include the Subcommittee on Managed Marshes, National Estuary Programs, Regional Oil Spill Response Teams, Minerals Management Service Regional Technical Working Groups, Superfund, implementation of Wetlands Planning, Protection and Restoration Act, and the Coastal America Initiative.

#### 5.1.1.5 Department of Housing and Urban Development (HUD)

The Department of Housing and Urban Development is home to a number of programs that promote improved neighborhood and community conditions, including water, drainage, and sewerage conditions. These are commonly provided through grants, the best known being the community development block grants (CDBG).

#### 5.1.1.6 Department of the Interior (DOI)

The Department of the Interior is the primary land holding agency of the U.S. government; broadly interpreted to mean "resource" holding, whether mineral rights, some waterways, or living species. The Department of Interior also has the authority for leasing minerals within federal coastal waters. The recurring proposals for Gulf off-shore oil and gas leasing and development must be approved

as leases by the Department of Interior. The Department of Interior has a number of uniformed agencies, including the National Park Service, the U.S. Fish and Wildlife Service (USFWS), and the U.S. Geologic Survey (USGS). The first is not active within the Estero Bay Watershed, but the latter two have had significant activities in the area.

The Assistant Secretary for Fish and Wildlife and Parks is directly responsibility for programs associated with conservation in the use of natural and cultural resources; and the enhancement, protection, and monitoring of fish, wildlife, vegetation, and habitat. The Assistant Secretary represents the Department of Interior in the coordination of marine environmental quality and biological resources programs with other Federal agencies. The Assistant Secretary also exercises Secretarial direction and supervision over the U.S. Fish and Wildlife Service, the National Biological Service, and the National Park Service.

The U.S. Fish and Wildlife Service is responsible for migratory birds, endangered species, certain marine mammals, and inland sport fisheries. Its mission is to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people. Within this framework, the Service strives to foster an environmental stewardship ethic based on ecological principles and scientific knowledge of wildlife; works with the states to improve the conservation and management of the nation's fish and wildlife resources; and administers a national program providing opportunities to the American public to understand, appreciate, and wisely use these resources.

**U.S. Geological Survey**

The United States Geological Survey (USGS) was established by act of March 3, 1879 (*43 U.S.C. 31*), which provided for "the classification of the public lands and the examination of the geological structure, mineral resources, and products of the national domain." The act of September 5, 1962 (*43 U.S.C. 31 (b)*), expanded this authorization to include such examinations outside the national domain. Topographic mapping and chemical and physical research were recognized as an essential part of the investigations and studies authorized by act of March 3, 1879, and specific provision was made for them through subsequent legislation. Provision was made in 1894 for gaging the streams and determining the water supply of the United States. Authorizations for publication, sale, and distribution of material prepared by USGS are contained in several statutes (*43 U.S.C. 41-45; 44 U.S.C. 1318- 1 320*).

USGS is also authorized to maintain an archive of land-remote sensing data for historical, scientific, and technical purposes, including long-term global environmental monitoring; establish a National Geologic Mapping Program; expedite the production of a geologic-map data base; establish and support the Federal Geographic Data Committee, which is chaired

by the Secretary of the Interior; and serve as the designated lead agency for the Federal Water information Coordination Program.

The Geological Survey's primary responsibilities are: (1) investigating and assessing the Nation's land, water, energy, and mineral resources; (2) conducting research on global change; and, (3) investigating natural hazards such a earthquakes, volcanoes, landslides, floods, and droughts. To attain these objectives, USGS prepares maps and digital and cartographic data; collects and interprets data on energy and mineral resources; conducts nationwide assessments of the quality, quantity, and use of the nation's water resources; performs fundamental and applied research in the sciences and techniques involved; and, publishes and disseminates the results of its investigations in thousands of new maps and reports each year.

**Water Resources Division**

**Branch of Technical Development and Quality Systems** - Operates and maintains the National Training Center, provides technical support and advice on quality management technology, manages and operates quality control programs for water resources, and provides training and coordination on quality assurance programs for the districts.

**Ground Water Atlas of the United States** - The U.S. Geological Survey series of print publications "The Ground Water Atlas of the United States" describes the location, extent, and the geologic and hydrologic characteristics of the important aquifers of the nation.

**National Atmospheric Deposition Program/National Trends Network (NADP/NTN)** - A nationwide network of precipitation monitoring sites. The first sites in the network were established in 1978. The network currently consists of approximately 200 sites.

**National Research Program** - Conducts basic and problem-oriented hydrologic research in support of the mission of the USGS. The program is designed to encourage pursuit of a diverse agenda of research topics aimed at providing new knowledge and insights into varied and complex hydrologic processes that are not well understood.

**National Water Quality Assessment Program (NWQAP)** - A program designed to assess historical, current, and future water-quality conditions in representative river basins and aquifers nationwide.

**National Water Summary** - A series of publications designed to increase public understanding of the nature, geographic distribution, magnitude, and trends of the nation's water resources. It often is referred to as the U.S. Geological Survey's "encyclopedia of water."

**National Water-Use Program -** A program examining the withdrawal, use, and return flow of water on local, state, and national levels.

**State Water Resources Research Institute Program** - A matching grant program to support water resources research, education, and information transfer at the 54 university based Water Resources Research Institutes. This program includes the National Institutes for Water Resources U.S. Geological Survey Student Internship Program.

**Toxic Substances Hydrology (Toxics) Program** - Provides unbiased earth science information on the behavior of toxic substances in the nation's hydrologic environments. The information is used to avoid human exposure, to develop effective cleanup strategies, and to prevent further contamination.

**USGS Environmental Affairs Program** - Provides guidance and information on the *National Environmental Policy Act* and other environmental issues.

**Program: Water Information Coordination Program (WICP) -** Purposes of the program are to ensure the availability of water information required for effective decision making for natural resources management and environmental protection and to do it cost effectively.

**Water Quantity and Quality**

The USGS periodically samples ground and surface water for flow and water quality at established sites throughout Florida. These data, from many years, provide a valuable data base for evaluating the water resources of the state. The USGS publishes the Water Resources Data Report annually, which provides data on quantities and quality of surface water as well as groundwater quality and levels. The report series includes records of stage, discharge, groundwater levels and water quality in streams, and stage (level) and water quality of lakes and groundwater wells. The USGS series of annual reports began in the 1961 water year, but only contained flow data. In 1964, the first annual report on water quality was introduced. By 1975, the present reporting format was initiated whereby each annual volume covers data on flow, quality of surface waters, and quality and water level in groundwater.

**Water and Science**

The Assistant Secretary (Water and Science) is directly responsibility to carry out the statutory mandate to manage and direct programs that support the development and implementation of water, mineral, and science policies and assist the development of economically and environmentally sound resource activities. The Assistant Secretary

oversees the programs of the Bureau of Reclamation, the United States Bureau of Mines, and the United States Geological Survey (USGS). The most pertinent to the Estero Bay Watershed of the entities is the USGS Biological Resource Division, who's programs include:

**Biomonitoring Environmental Status and Trends (BEST)**: Best is a program designed to identify and understand the effects of environmental contaminants on biological resources.

**Earth Stewards**: Earth Stewards is a three year pilot program that provides teachers with new ways to engage students in science by offering hands-on activities, professional mentors, and community stewardship projects.

**GAP Analysis**: GAP analysis is a geographic approach for assessing the current protection status of biological diversity over large geographic areas.

**Global Change Research Program**: Several Global Change Research Program databases described using the January 25, 1994 version of the Spatial Metadata Content Standard. The U.S. Global Change Research Program (GCRP) contributes to an understanding of the processes and impacts of global climate change.

**Interagency Taxonomic Information System**: A standard reference on nomenclature and taxonomy of plants and animals.

**Information Resources Management Program**: The Information Resources Management Program includes telecommunications, networking, office automation, records management, computer security, e-mail, distributed data systems, applications technologies, and the training, procurement, and technology research necessary to support these activities.

Land Use History of North America: Land Use History of North America is a multi-year project to prepare a scientifically-based "history" of land use change across North America, from prehistoric times to the present.

**Man and the Biosphere Program Fauna Database**: The Fauna Database lists species for biosphere reserves.

**National Contaminant Biomonitoring Program**: The National Contaminant Biomonitoring Program characterizes the exposure of free-ranging organisms such as fish and starlings (including threatened and endangered species) to toxic contaminants using a national network of stations.

**National Ecological Surveys Team (NEST)**: NEST evaluates ecological inventory monitoring and analysis programs, designs nationwide species and population monitoring surveys, develops methods for the analysis of resulting data to estimate the status and trends of the nation's biotic diversity, and maintains partnerships for analysis and management with cooperating organizations.

**North American Breeding Bird Survey**: The North American Breeding Bird Survey is a source of population trend and distribution information for most species of North American birds.

**Non-indigenous Aquatic Species Program**: The Non-indigenous Aquatic Species Program is a national information resource for accurate and spatially referenced biogeographic accounts of non-indigenous aquatic species.

**National Park Flora and National Park Fauna Databases**: The National Park's flora and fauna databases are sources of information for vertebrate and vascular plant occurrences in the National Parks.

**Species at Risk**: The Species at Risk program develops information that will lead to the stabilization of declining populations and reduce or eliminate the need for additional listings under the *Endangered Species Act*.

**Status and Trends**: Information on published reports concerning the status and trends of biological resources in the United States.

**U.S. Man and the Biosphere Program (MBP)**: The MBP is a federal interagency program providing an interdisciplinary approach to address environmental problems, land use, and conservation issues.

**Vegetation Mapping Program**: The vegetation mapping program is a multi-year project to produce vegetation maps of 235 natural resources parks within the National Park System.

**National Biological Information Infrastructure (NBII)**: Through the NBII, Federal and State agencies, researchers, universities and museums, planning and environmental consultants, private companies, landowners, and the public are now gaining easy access to information on biological resources around the nation and the world.

**U.S. Fish and Wildlife Service (FWS)**

Enabling legislation includes:

*Endangered Species Act of 1973*

*Marine Mammal Protection Act*
*Fish and Wildlife Coordination Act*
*Coastal Barrier Resources Act (PL 97-349)*;
*Coastal Barrier Improvement Act (PL 101-591)*

In the area of resource management, the U.S. Fish and Wildlife Service provides leadership for the protection and improvement of land and water environments (habitat preservation), which directly benefits the living natural resources and adds quality to human life. These activities include:

- surveillance of pesticides, heavy metals, and other contaminants;
- studies of fish and wildlife populations;
- ecological studies;
- environmental impact assessment, including hydroelectric dams, nuclear power sites, stream channelization, and dredge-and-fill permits; and
- land policy impact statement review.

The Service is responsible for improving and maintaining fish and wildlife resources by proper management of wildlife and habitat. It also helps fulfill the public demand for recreational fishing, while maintaining the nation's fisheries at a level and in a condition that will ensure their continued survival. Specific wildlife and fishery resources programs include:

- migratory birds: wildlife refuge management for production, migration, and wintering; law enforcement; game, bird population, production, and harvest surveys;
- mammals and nonmigratory birds: refuge management of resident species law enforcement, protection of certain marine mammals, and technical assistance;
- coastal anadromous fish: hatchery production and stocking; and
- other inland fisheries: hatchery production and stocking of Native American lands, and technical assistance.

The Service provides national and international leadership in identifying, protecting, and restoring endangered species of fish, wildlife, and plants. This program includes:

- developing the Federal Endangered and Threatened Species List, conducting status surveys, preparing recovery plans, and coordinating efforts nationally and internationally;
- operating national wildlife refuges;
- law enforcement;
- foreign importation enforcement; and
- consultation with foreign countries.

Public use and information programs include preparing leaflets and brochures; operating environmental study areas on U.S. Fish and Wildlife Service lands for use by school groups and teachers; operating visitor centers, self-guided nature trails, observation towers, and display ponds; and providing recreational activities, such as hunting, fishing, and wildlife photography.

The Service's Federal Aid programs apportion funds generated by excise taxes on sporting arms and equipment to the states and territories for projects designed to conserve and enhance the nation's fish and wildlife resources.

Several species of fish, wildlife, and plants in the U.S. are considered of ecological, educational, historical, recreational, and scientific value to the U.S. The Endangered Species Act provides a means, through lead efforts by the FWS, to protect endangered or threatened species and the ecosystems on which they depend. The FWS is responsible for upholding statutes and agreements associated with the Act that include: land acquisition authority; cooperative interstate, interagency, and international agreements; and possession, transport, and breeding of listed species.

The FWS conducts on-site ecological surveys at proposed development sites to assess possible effects on fish and wildlife resources, as well as assure accomplishment of the objectives of the Endangered Species Act and the Fish and Wildlife Coordination Act. The USFWS maintains a number of refuges within Southwest Florida. The Service also has special Florida panther, American Bald Eagle, and West Indian Manatee programs that are important for habitat protection.

The objectives of the Service's coastal barrier protection program are taken directly from the *Coastal Barrier Resources Act* (*CBRA*), as modified by the *Coastal Barrier Improvement Act* (*CBIA*). The *CBRA* established the Coastal Barrier Resource System (CBRS) to minimize: (a) loss of life; (b) wasteful expenditure of federal revenues; and, (c) damage to fish, wildlife, and other natural resources. The CBRS is comprised of specifically defined geographical areas designated by Congress. Prohibition on new federal financial expenditures and assistance other than flood insurance went into effect upon enactment of *CBRA* in 1982. Flood insurance to new development was prohibited after October 1, 1983. The size of the *CBRA* was significantly increased in 1990 through the passage of the *Coastal Barrier Improvement Act* through the expansion of existing sites and the addition of new units. Federal agencies must consult with the Service prior to making expenditures or financial assistance that directly affect such sites.

#### 5.1.1.7 Department of Transportation (DOT)

The Department of Transportation is the primary provider of internal infrastructure improvements within the United States, funding a portion of every state's roadway and airport system.

**The Intermodal Surface Transportation Efficiency Act**

The *Intermodal Surface Transportation Efficiency Act* (ISTEA) was signed on December 18, 1991 and launched the first major restructuring of the country's surface transportation programs (highways and transit) since the beginnings of the Interstate Highway system in 1956. Transportation has great impacts on soils, water, wetlands, flora, and fauna. Water quality is generally affected by transportation through run-off from new construction and existing highways, air deposition of mobile source emissions, and wetland loss.

ISTEA gives state and local officials a range of choices for meeting their transportation needs, as well as added tools to improve air quality, through increased funding, flexibility to select the best mix of projects to meet local mobility and environmental needs, strengthened planning and public involvement processes, and the Congestion Mitigation and Air Quality (CMAQ) program. As the *Clean Air Act* brought transportation decisions into the context of achieving and maintaining cleaner and healthier air, the ISTEA was designed to help transportation officials meet some of those same challenges. Congress is currently evaluating the provisions of the Administration's proposal for the next generation ISTEA, the *National Economic Crossroads Transportation Efficiency Act* or "NEXTEA." Implementation of components of ISTEA have been delegated to Florida Department of Transportation and the Metropolitan Planning Organizations within Lee and Collier Counties.

**U.S. Coast Guard (CG)**

The Coast Guard, established by an act on January 28, 1915 (14 U.S.C. 1), became a component of the Department of Transportation on April 1, 1967, pursuant to the *Department of Transportation Act of October 15, 1966* (49 U.S.C. app. 1651 note). The Coast Guard is a branch of the Armed Forces of the United States at all times and is a service within the Department of Transportation except when operating as part of the Navy in time of war or when the President directs. The predecessor of the Coast Guard, the Revenue Marine, was established in 1790 as a Federal maritime law enforcement agency. Many other major responsibilities have since been added.

**Marine Environmental Response**

The Coast Guard is responsible for enforcing the *Federal Water Pollution Control Act (33 U.S.C. 1251)* and various other laws relating to the protection of the marine environment. Program objectives are to ensure that public health and welfare and the environment are protected when spills occur. Under these laws, U.S. and foreign vessels are prohibited from using U.S. waters unless they have insurance or other guarantees that potential pollution liability for cleanup and damages will be met.

The Coast Guard enforces environmental regulations through vessel and facility inspections. Enforced laws include the *Federal Water Pollution Control Act*, as amended, the *Marine Protection Research and Sanctuaries Act*, and the *Act to Prevent Pollution from Ships*. The Coast Guard regularly inspects commercial vessels in port and at sea. The inspection schedule is subject to a variety of factors. There is no dedicated inspection program specifically targeted at recreational vessels, however, they are inspected during routine operations and by state enforcement agencies.

The Coast Guard is responsible for enforcing the Marine Sanitation Device (MSD) provisions of the *Clean Water Act*. On any vessel with installed toilets, MSDs are required either to treat sewage prior to discharge into the water or to store sewage aboard for later disposal ashore. Inspections for compliance are conducted as a part of routine operations.

Other functions include providing a National Response Center to receive reports of oil and hazardous substance spills, investigating spills, initiating subsequent civil penalty actions when warranted, encouraging and monitoring responsible party cleanups, and when necessary, coordinating federally funded spill response operations. The program also provides a National Strike Force to Deepwater Ports under the provisions of the *Deepwater Port Act* of 1974 (33 U.S.C. 1501), the Coast Guard administers a licensing and regulatory program governing the construction, ownership (international aspects), and operation of deepwater ports on the high seas to transfer oil from tankers to shore.

**Bridges and Causeways**

*General Bridge Act of 1946*
*Rivers and Harbors Act of 1899*

The Secretary of Transportation has delegated authority to the U.S. Coast Guard [49 CFR 1.4(a)(3)] to review plans for anyone proposing to construct bridges and causeways across navigable waters of the U.S. The U.S. Coast Guard can impose any conditions on the design, construction, maintenance, and operation of such structures deemed necessary in the interest of public navigation. Plan reviews also give weight to environmental concern. The Coast Guard is obligated to consult with any federal agency which has legal jurisdiction or appropriate environmental expertise involved with a permit for a reviewed plan. Bridge permits for all projects associated with navigable waters of the United States within the Estero Bay Watershed must be obtained from the Coast Guard.

**Office of Pipeline Safety**

The Department of Transportation is also responsible for Pipeline Safety Regulations pursuant to the *Natural Gas Pipeline Safety Act of 1968*, the *Hazardous Liquid Pipeline Safety Act of 1979*, and the *Hazardous Materials Transportation Act of 1974*.

The Office of Pipeline Safety establishes and provides for compliance with standards that assure public safety and environmental protection in the transportation of gas and hazardous liquids by pipeline. This Office administers a program whereby a state agency can voluntarily assert safety regulatory jurisdiction over all or some intrastate pipeline facilities. The federal government is authorized to pay a state agency grant-in-aid funds of up to 50 percent of the actual cost for carrying out its pipeline safety program. The Office under the *Oil Pollution Act of 1990* established regulations requiring petroleum pipeline operators to prepare and submit plans to respond to oil spills for federal review and approval.

#### 5.1.1.8 Federal Emergency Management Agency (FEMA)

The Federal Emergency Management Agency is the nation's emergency response agency. It also has significant mitigation programs, including flood plain mapping for the Federal Insurance Administration. Enabling legislation includes:

*National Flood Insurance Act (NFIA)*
*National Flood Insurance Program (NFIP)*

FEMA administers the NFIP, whereby states may adopt FEMA criteria to obtain federal financial assistance and aid. FEMA also develops regulations with regard to the general terms and conditions of insurability under the NFIP. The NFIP administered by FEMA serves to 1) increase coverage limits of the NFIP, 2) provide assistance in the identification and dissemination of flood-prone area information, 3) require states or communities to participate in the insurance program and to adopt adequate flood plain ordinances with effective enforcement provisions in accord with federal standards, and 4) require property owners in special flood areas to purchase flood insurance.

The National Flood Insurance Fund, established under FEMA, provides payments for flood damage, reinsurance claims, repayment of borrowed funds from the Treasury, and to finance administration.

#### 5.1.1.9 U.S. Department of Agriculture (USDA)

Broad reaches of the nation's agricultural areas were made possible only through control and alteration of the natural hydrological regime. The most evident presence of that role was the Soil Conservation Service, which was renamed the Natural Resources Conservation Service. The name change denotes the change in focus from making more lands available for agriculture to making land and water resources more sustainable for production. Also the omnibus 1996 Farm bill, which influences many USDA programs, incorporates many water quality and habitat goal.

**Statutory Citation**: *Soil Conservation Act of 1835, Department of Agriculture Reorganization Act of 1994, 7 U.S.C. §6962*
*Federal Level Recommendation 3 of "A Unified National Program for Flood Plain Management"*
*Watershed and Flood Prevention Act, Public Law 83-566*
*Joint Coordination Agreement between SCS (now NRCS) and the Department of Community Affairs (DCA)*

**Program: Natural Resources Conservation Service (NRCS)**

The Natural Resources Conservation Service is the federal agency that works with landowners on private lands to conserve natural resources. Nearly three-fourths of the technical assistance provided by the agency helps farmers and ranchers develop conservation systems uniquely suited to their land and individual ways of doing business. The agency also provides assistance to rural and urban communities to reduce erosion, conserve and protect water, and solve other resource problems.

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) provides leadership and technical assistance to federal, state, and local government bodies in their flood plain management programs. Assistance is provided through flood plain management studies in accordance with *Federal Level Recommendation 3 of "A Unified National Program for Flood Plain Management" and Section 6 of Public Law 83-566.* This is in accordance with Recommendation 9© of House Document No. 465, 89th Congress, 2nd Session; Executive Order 11988 dated May 24, 1977; and USDA Secretary's Memoranda 1606 and 1607. In Florida, these studies are authorized under the November 1978 Joint Coordination Agreement between the SCS (now NRCS) and the DCA.

The NRCS also administers programs to help private land owners (primarily farmers) conserve, improve, and sustain the natural resources and environment. More specifically, the NRCS technical staff assists individual farmers on non-federally owned lands in planning and applying measures to reduce erosion, conserve water, and protect other renewable natural resources.

NRCS employees have the technical expertise and field experience to help land users solve their natural resource challenges and maintain and improve their economic viability. Employees are skilled in many scientific and technical specialties, including soil science, soil conservation, agronomy, biology, agroecology, range conservation, forestry, engineering, geology, hydrology, cultural resources, and economics.

Over the past decade, the NRCS has been helping producers develop and implement 1.7 million conservation plans on 143 million acres of highly erodible cropland as part of the conservation compliance provision of the *Food Security Act of 1985.* As a result, erosion on the most highly

erodible cropland in the nation has been cut by two-thirds (related to land use and management issues).

NRCS provides assistance to farmers and ranchers to improve water quality. This includes improving nutrient and pesticide management and reducing soil erosion, thus decreasing sediment that would otherwise end up in lakes and streams. In many parts of the country where water conservation is a priority, NRCS helps farmers and ranchers conserve water. Soil conservationists help farmers and ranchers irrigate more efficiently (related to water quality issues).

NRCS is one of the four primary federal agencies involved with wetland conservation. It now administers the Wetlands Reserve Program. Under this program, conservation easements are purchased from landowners to restore, enhance, or create wetland areas. Ownership, control of access, and some compatible uses remain with the landowner.

**Program: 1996 Farm Bill** - Described in greater detail in the preceding section, the conservation provisions of the 1996 Farm bill simplify existing conservation programs and improve their flexibility and efficiency. The bill also creates new programs to address high priority environmental protection goals. The Farm bill authorizes more than $2.2 billion in additional funding for conservation programs, extends the Conservation Reserve Program and Wetland Reserve Program, and creates new initiatives to improve natural resources on America's private lands. Particularly relevant sections of the Farm bill include:

**Umbrella Program Reform** - The Farm bill reforms an existing program, the Environmental Conservation Acreage Reserve Program (ECARP), which encompasses the existing Conservation Reserve Program, the new Environmental Quality Incentives Program, and the Wetland Reserve Program.

**Conservation Reserve Program (CRP)** - The CRP protects highly erodible and environmentally sensitive lands with grass, trees, and other long-term cover.

**Environmental Quality Incentives Program (EQIP) -** The Environmental Quality Incentives Program (EQIP) is a new program which combines the functions of the Agricultural Conservation Program, Water Quality Incentives Program, Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. EQIP is funded at $130 million in fiscal year 1996 and $200 million annually thereafter. Livestock-related conservation practices will receive 50 percent of program funding.

**Wetland Reserve Program (WRP) -** The WRP will have an enrollment cap of 975,000 acres. Program changes provide more flexibility and help landowners work toward a goal of no net loss of wetlands.

**Wetland Conservation (Swampbuster) -** The 1996 Farm Bill makes several policy changes to existing Swampbuster provisions to give farmers more flexibility in complying with wetland conservation requirements while protecting natural resources.

**Wetlands Memorandum of Agreement (MOA) -** The Farm bill expands the definition of agricultural land contained in the interagency Wetlands MOA to include not only cropland and pasture land, but also tree farms, rangeland, native pasture land, and other land used for livestock production.

**Conservation Research and Education -** The Farm bill creates the National Natural Resources Conservation Foundation as a charitable nonprofit corporation to fund research and educational activities related to conservation on private lands. The foundation will promote innovative solutions to conservation problems through public-private partnerships and accept private gifts of money or property to be used for conservation activities. Congress has authorized $1 million annually from 1997 through 1999. The new foundation will offer grants for research, education, and demonstration projects. Grants will also assist conservation districts in building resources to carry out local conservation programs. A nine-member board of trustees appointed by the Secretary will administer the foundation.

**Conservation Compliance -** The Farm bill makes several policy changes in the operation of conservation compliance:

- Directs USDA employees who are providing on-site technical assistance to work with landowners to correct an observed potential compliance problem. Landowners will have up to one year to take corrective action before a violation is reported.
- Encourages farmers to maintain records of residue measurement, including those provided by a third party. Where appropriate, USDA will use these measurements when conducting annual status reviews to determine erosion levels.
- Authorizes county committees to provide relief in cases of undue economic hardship.
- Revises “good faith” to ensure penalties are commensurate with violations.

**Conservation of Private Grazing Land -** The grazing lands provision is a new program to ensure technical, educational, and related assistance is provided to landowners on the nation’s 642 million acres of private grazing lands. In fiscal year 1996, $20 million is authorized. This amount increases to $60 million by the third year.

**Farmland Protection Program -** The Farmland Protection Program is a new program under which the Secretary of the Department of Agriculture will join with state or local governments to purchase conservation easements. Based on voluntary participation, it only applies to land which farmers want to preserve in agriculture. The program protects between 170,000 and 340,000 acres of farmland; authorizes up to $35 million in total federal funding;

and requires land to be subject to a pending offer from a state or local farmland conservation program in order to participate.

**Flood Risk Reduction** - This provision authorizes voluntary contracts that provide one lump sum payment to producers who farm land with high flood potential. The payment will equal 95 percent of the seven-year market transition payments, and other payments to offset estimated federal outlays on frequently flooded land. In return, the producer agrees to comply with applicable wetlands and highly erodible land requirements and to forego commodity loans, crop insurance, conservation program payments, and disaster payments.

**Wildlife Habitat Incentives Program** - This new provision will help landowners improve wildlife habitat on private lands. The program will have $50 million in Conservation Reserve Program (CRP) funds for wildlife habitat improvement.

**Emergency Watershed Protection Program Flood plain Easements** - The Farm bill authorizes the Secretary to purchase flood plain easements under the Emergency Watershed Protection Program.

**State Technical Committees** - State technical committees help develop technical standards for conservation programs. The Farm bill requires public notice of meetings and expands committee membership to include representatives of non-government organizations such as agricultural producers, non-profit conservation organizations, agribusiness, and experts on the economic and environmental impacts of conservation techniques.

**Resource Conservation and Development Program (RC&D) -** The purpose of the RC&D Program is to accelerate the conservation, development, and utilization of natural resources to improve the general level of economic activity, and to enhance the environment and standard of living in authorized RC&D areas. The basic objectives of the RC&D Program are:

- The orderly development, improvement, conservation, and utilization of natural resources within a designated project area, thereby providing employment and other economic opportunities to the people of the area.
- To provide local leadership the opportunity to more fully coordinate and utilize the facilities and techniques available under current agricultural programs, including those made available by *Public Law 87-703*, and any applicable new programs as may be instituted to aid in planning and carrying out a balanced program of development and conservation of natural resources to meet local, state, and national needs.

- The orderly extensions of this program, where needed, project by project, as local leadership is able to effectively plan and carry out the activities necessary to achieve the goals of the program. This program is reauthorized until 2002.

**Forestry Incentives Program** - The 1996 Farm bill extends the Forestry Incentives Program (FIP) through the year 2002. The program was authorized in 1978 and pays up to 65 percent of the costs of tree planting, timber stand improvements, and related practices on nonindustrial private forest lands. In addition to helping assure a reliable supply of timber, FIP's forest maintenance and reforestation activities provide numerous natural resource benefits, including reduced wind and soil erosion, enhanced water quality, and improved wildlife habitat. Improving timber stands also helps sequester carbon and assists in reducing greenhouse gases. To be eligible for cost-share assistance under FIP, the landowner must:

- own no more than 1,000 acres of eligible forest land. In the public interest, the Secretary of Agriculture can grant an exception for larger acreages;
- be a private landowner of a nonindustrial forest. Individuals, groups, associations, or corporations whose stocks are not publicly traded may be eligible for FIP provided they are not primarily engaged in the business of manufacturing forest products or providing public utility services;
- have land that is suitable for conversion from cropland into forest land (afforestation) if presently not in trees; for reforestation; or for improved forest management; and
- have land that is capable of producing marketable timber crops and meets minimum productivity standards established for FIP. At least 10 acres of eligible forest land is required for FIP.

**Soil Survey** - The Farm bill provides flexibility in determining how soil survey information is communicated to the public.

**Everglades** The Farm bill supports ongoing efforts to protect the Everglades ecosystem. This provision authorizes $200 million for restoration activities, including land acquisition. Authority is also provided to sell or exchange an additional $100 million in federal land to help protect the Everglades. (The Estero Bay Watershed is included in these provisions, since the boundary of the Everglades frequently refers to being comparable to that of the South Florida Water Management District.

## 5.2 State of Florida

Florida's general governance structure is determined by the State Constitution of 1968 (as amended). It provides for a seven member executive branch, a two house legislative branch, and the state judiciary. A number of entities that will be profiled in this section receive their general authority

from the State Constitution, including the state's water management districts, the Florida Game and Fresh Water Fish Commission, and local governments. Other entities receive their authorities from specific sections of the Florida Statutes. Agencies, and their general roles are provided in Table 5-3. Agencies in Florida are authorized, and in some cases required, to further explain their processes and criteria for decision making through adopting administrative rules. These rules are codified in the *Florida Administrative Code* (FAC). The statutory and administrative code references are provided in succeeding sections.

## The Legislative Branch

The Florida Legislature is bicameral; composed of a Senate and House of Representatives. The Legislature meets in general session for two months a year, and in special session upon demand. The Legislature is the sole law making and budget agency for the State of Florida, but has constitutional checks on its authorities, which are reviewed by the Judicial branch. Legislation consists of two types; General Law, which is ultimately codified in the *Florida Statutes* (F.S.) and Special Law, which with general law is contained in the annual *Laws of Florida*.

The Legislature performs its initial analysis through committees. The most pertinent of these are the "standing committees" of each House. Both Houses have Natural Resource Committees, through which most environmental legislation is passed. Each House also has a Community Affairs Committee, through which laws affecting the powers and duties of local governments are passed.

One specific committee of relevance is the Public Service Commission (PSC). The PSC regulates the rates of privately-owned water and sewer companies, and hence has influence over franchises that compete for natural resources.

**Table 5-3. State Agency Roles.**

| AGENCY | ROLE | | | | | |
|---|---|---|---|---|---|---|
| | **Regulatory** | **Review** | **Planning** | **Research** | **Funding** | **Ownership** |
| Trustees | | X | X | | | |
| FLAWAC | X | | | | | |
| Att. Gen | | X | | | | |
| DOA | X | X | X | X | | X |
| Education | | | | X | X | X |
| DCA | X | X | X | | X | |

| | | | | | | |
|---|---|---|---|---|---|---|
| DEP | X | X | X | X | X | X |
| DOH | X | X | | X | | |
| DOT | X | X | X | | X | X |
| GFC | X | X | X | X | | X |

**The Executive Branch**

The Executive Branch is the administrative, ministerial, and operational branch of state government. It is authorized to submit a budget to the Legislature, over which the Legislature has final say, with constitutional exceptions, and has authority to interpret legislation through the preparation and adoption of interpretive rules, which constitute the *Florida Administrative Code*.

### 5.2.1 The Governor and Cabinet Agencies

The Governor and Cabinet comprise the state's executive branch. The cabinet includes the state constitutional officers of Attorney General, Secretary of State, Commissioner of Education, the Comptroller, the Treasurer, and the Commissioner of Agriculture. Each cabinet officer heads at least one department, with the Governor capped at 25 such departments. These include:

**The Board of Trustees of the Internal Improvement Trust Fund (Trustees or TIITF)**. This Board is the Governor and Cabinet in their role as holders of the state's lands, including authorizing or forbidding their use by public or private entities. In an earlier capacity the Trustees authorized the dredging and filling of state holdings; now, the trustees limit such use and have been expanding the state's holdings through various programs discussed later.

**The Florida Land and Water Adjudicatory Commission (FLAWAC)**. This Commission is the Governor and Cabinet in their role as the appellate body for administrative decisions (such as permit issuance or denial, local plan consistency, etc.) by Water Management Districts, the Department of Environmental Protection, and the Department of Community Affairs.

**Cabinet Agencies**. Specific Cabinet Officers have relevant roles.

**Attorney General and Department of Legal Affairs**. The Attorney General represents the state in all legal matters appearing before the Courts of Appeal through the Department of Legal Affairs, including those necessary to protect state lands. The Attorney General serves as the advisor to public agencies through providing legal opinions upon request.

**Commissioner of Agriculture and Department of Agriculture and Consumer Services**.

The Department of Agriculture and Consumer Services has regulatory jurisdiction through registration of all pesticides distributed, sold, or offered for sale in the state. The department regulates the purchase or use of restricted pesticides by permitting and licensing. In 1981 the Florida Legislature adopted *Chapter 81-236, Laws of Florida,* which amended *F.S. 487.061* to provide for the creation, membership, duties, and organizational structure of the Pesticide Technical Council. Consistent with the *Florida Pesticide Law,* the Pesticide Technical Council has the powers and duties to consider and study the entire field of pesticides and pesticide application. The council may review and make recommendations to the Department of Agriculture and Consumer Services on any pesticide registration submitted to it by the department, and it may make recommendations to the department on its own initiative concerning changes in laws and rules relating to pesticides and pesticide application.

The department also plays a role in soil and water conservation and the care and management of forests and woodlands in the state through the Soil and Water Conservation Districts and the Division of Forestry.

Since 1978 the Department of Agriculture and Consumer Services and the Endangered Plant Advisory Council have had regulatory jurisdiction over the removal of endangered native Florida plants as set forth on the endangered plant list contained in F.S. 581.185(2).

**Chapter 582, F.S. (Soil and Water Conservation)** was the mechanism for establishing soil and water conservation districts to control or prevent soil erosion, prevent flood water or sediment damage, and further the conservation, development, and utilization of soil and water resources. The DACS is the state agency responsible for creating and operating soil and conservation districts.

**Chapter 92-203, Laws of Florida (Mosquito Control)** The DACS is involved with mosquito control and preservation of native flora species of Florida. The DACS has established and provides funding to district or county mosquito control programs.

**Chapter 388, F.S. (Arthropod Control)** Rules have been established by the DACS for mosquito control in environmentally sensitive and biologically productive public lands and other public lands.

**Chapter 10D-54, F.A.C. (Mosquito Control Administration)**

**Chapter 5B-40, Florida Administrative Code (F.A.C.) (Preservation of Native Flora of Florida)** The DACS has also established rules with regard to preserving the native flora of Florida by encouraging the propagation of endangered or depleted species of flora and by identifying procedures for restricting harvesting of naturally occurring native flora.

The Commissioner of Agriculture has a broad variety of responsibilities as they related to land use and water resources.

- **Division of Forestry** has a direct role on land use through maintaining the State-owned forests, promoting general forestry practices, and providing fire protection services to rural areas. The urban forester program is hosted in this division.
- **Pesticide Review Council** reviews pesticide use.
- **Fertilizer Technical Council** reviews fertilizer use.
- **Soil and Water Conservation Council** reviews land use practices with the separate Soil and Water Conservation Districts.
- **Aquaculture Review Council** reviews aquaculture proposals and promotes aquaculture.
- **Endangered Plant Advisory Council** advises on such plants and practices to protect.

**Governor's Agencies**

The Governor has control over 25 separate state agencies and oversees them, in part, through the Executive Office of the Governor. Only a few state agencies have direct responsibilities over environmental quality and a few others have direct impact upon the quality of the environment. These agencies include:

### 5.2.2 Department of Community Affairs (DCA)

*Local Government Comprehensive Planning and Land Development Regulation Act*
*Developments of Regional Impact, Florida's Coastal Management Act of 1978*

The Local Government Comprehensive Planning and Land Development Regulation Act was promulgated to protect natural resources within respective jurisdictions of local government. The DCA is charged with reviewing local comprehensive plans for consistency with state statutes, rules, and other regulations, as well as with appropriate regional policy plans and the State Comprehensive Plan. The DCA has also been designated to review Development of Regional Impact (DRI) applications. The DRI review process was designed to ensure that projects which, because of their size or nature, have the potential to cause multi-jurisdictional impacts are developed in a manner consistent with state and regional goals.

In March of 1992, the DCA was authorized responsibility for the Coastal Zone Management (CZM) program. The CZM program requires application submittal to the federal government as a basis for receiving funds under *the Federal Coastal Zone Management Act of 1972*. The DCA conducts coastal zone management consistency reviews and determinations for any federal licenses, permits, activities, or projects subject to federal consistency review.

DCA is the state's land planning agency and it carries out its functions through its administrative structure, and contractual responsibilities with the state's regional planning councils. The Department also oversees a number of trust funds through other divisions within the agency, including federal and state funds for housing and community development. The Department's most relevant agencies in the Estero Bay Watershed include:

**Division of Resource Planning and Management**. This division has review authority over the comprehensive planning required of the state's local governments and special authority to review permits in areas the legislature has declared to be of critical state concern. The division also has the authority to appeal development orders issued to land development proposals that have "regional" impact.

- **Office of the Secretary**. The state's Coastal Zone Management Program is contained within this Office, which oversees the state's coastal consistency program. The Office of the Secretary also contains the state's energy program.

- **Division of Emergency Management**. Primarily an emergency preparedness and response agency, this division oversees the state's hazardous materials registration and planning program, including the quick response program for spills and releases of hazardous materials.

- **Program: Flood Insurance Program and Flood Prevention** DCA's emergency management role for flooding and flood protection primarily operate in conjunction with contracted authority from the Federal Emergency Management Administration (FEMA).

### 5.2.3 Department of Environmental Protection (DEP).

(Formerly Florida Dept. Of Environmental Regulation (FDER) and Florida Department of Natural Resources (FDNR)). Enabling legislation includes:

*Florida Air and Water Pollution Control Act*
*Water Resources Restoration and Preservation Act*
*National Pollutant Discharge Elimination System (NPDES) in accordance with s. 402 of the Clean Water Act*

*Florida Litter Law*
*Transmission Line Siting Act*
*Resource Recovery and Management (s. 403.704, F.S.)*
*Statewide Multipurpose Hazardous Wetlands Protection Act of 1984*
*Warren S. Henderson Wetlands Protection Act of 1984*
*Indian River Lagoon Zero Discharge Act*
*Electric Power Plant and Transmission Line Siting Act*
*Water Management Lands Trust Fund*
*Surface Water Improvement and Management Act*
*Construction Grants Program*
*Marine Turtle Protection Act*
*Florida Manatee Sanctuary Act*
*Protection of Mammalian Dolphins*
*Florida Aquatic Weed Control Act*
*Marine Fisheries Commission*
*Coastal Zone Protection Act of 1985*
*Florida Aquatic Preserve Act of 1975*
*Florida Preservation 2000 Act*
*Conservation and Recreation Lands Trust Fund*
*Florida Endangered and Threatened Species Act of 1977*
*State Lands Management*

In July 1993, the FDER merged with the FDNR to form the DEP. The DEP administers numerous Florida Statutes dealing with sewage treatment, wetlands, hazardous waste, industrial and electric plan siting, stormwater discharge, underground storage tanks, and surface and ground water issues. The major environmental laws and programs administered by DEP are listed above; most of these laws and programs affect the Estero Bay Watershed in some manner. Those DEP programs dealing with wastewater and stormwater in the Estero Bay estuarine watershed, as well as the dredging and filling of wetlands, may be of utmost importance with respect to water quantity and quality issues. Florida has centralized its air and water quality components within the Florida Department of Environmental Protection (FDEP). FDEP is the agency to which the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers delegates certain of their functions. It should be noted that FDEP could and has delegated certain functions to regional and local entities. Additionally, hazardous materials storage and the response to aerosol or liquid spills, is coordinated through the Florida Department of Community Affairs.

In addition DEP hosts two initiatives that are of importance within the Estero Bay Watershed. These are the Greenways Initiative, which coordinates voluntary efforts to create and preserve greenways and trails, (which include "blueways," which are aquatic trails), and the Ecosystem Management initiative, which is managing through a sense of place, rather than by program aspect. The Department divisions that are importance to natural resources within the Estero Bay Watershed include:

**Office of the Secretary** - Top management, appointed by the Secretary, includes two Deputy Secretaries; the General Counsel, an Executive Liaison Officer; an Executive Services Director and an Executive Coordinator of Ecosystem Management. The Office of General Counsel oversees enforcement of air/waste, water/Environmental Resource Permitting (ERP), state lands and natural resources. The Offices of Legislative and Cabinet Affairs, Communications, Greenways and Trails and Ombudsman are coordinated by the Executive Liaison Officer. Administration and Technical Services, and Inspector General are under the leadership of the Executive Services Director; and, the Executive Coordinator of Ecosystem Management is responsible for ecosystem planning, water policy, intergovernmental programs and environmental education.

**Office of Greenways and Trails**. - The Office of Greenways and Trails (OGT) is responsible for the development of a comprehensive plan for a statewide system of greenways and trails, consistent with DEP's policies. OGT concentrates on ecosystem management and creates multiple-use recreational facilities where appropriate. OGT's activities are enhanced by partnerships with counties, citizen groups, and other agencies. Staff relies on ecosystem management techniques for all planning and development activities.

**Office of Ecosystem Management -** The *Environmental Reorganization Act of 1993* required DEP to "protect the functions of entire ecological systems through enhanced coordination of public land acquisition, regulatory and planning programs." DEP is achieving this legislative mandate by reorienting its programs along ecosystem rather than political or administrative boundaries. This management concept, known as ecosystem management, integrates diverse programs to achieve priority environmental goals.

Ecosystem Management (EM) is an integrated, flexible approach to management of Florida's biological and physical environments conducted through the use of tools such as planning, land acquisition, environmental education, regulation and pollution prevention designed to maintain, protect, and improve the state's natural, managed, and human communities.

The Office of Ecosystem Management is comprised of the Office of Ecosystem Planning and Coordination, the Office of Water Policy, the Office of Intergovernmental Programs and the Office of Environmental Education and Publications.

**Office of Ecosystem Planning and Coordination -** This office coordinates development of department-wide strategies for implementing ecosystem management at both the policy and operational levels. It evaluates agency need for ecosystem research and monitoring and develops cooperative projects with universities and institutions. It coordinates the Department of Environmental Protection's (DEP) implementation of the *Everglades Forever Act* and is the main point of contact for Everglades issues. It evaluates DEP's programs' and management activities' effects on resources under the agency's administration and their consistency with ecosystem

management goals and objectives. Staff in this office sit on various advisory bodies including: the Land Management Advisory Council, the Non-Game Wildlife Advisory Council and the Florida Panther Technical Subcommittee.

**Marine Fisheries Commission -** The Marine Fisheries Commission adopts all rules relating to marine life, with the exception of endangered species. Its rules are subject to final approval by the Governor and Cabinet. The Commission is composed of seven members appointed by the Governor and confirmed by the Senate. The Commission employs its own executive director and staff and is housed under the Board of Trustees of the Internal Improvement Trust Fund

**Divisions within DEP** - The following Divisions and Sections within DEP are responsible for dealing with important water quantity, quality and habitat issues within the Estero Bay Watershed.

- **Division of Air Resource Management**. The Division of Air Resources Management administers the state's air pollution control program, which implements the *Federal Clean Air Act*, and issues permits for sources of air pollution. It develops air quality standards, and monitors air quality, all in conjunction with eight local approved programs. The Division has two bureaus and an Office of Policy Analysis and Program Management.

- **Division of Law Enforcement**. The compliance and enforcement efforts of the state, in its capacity as landowner and resource owner, is carried out through the Division of Law Enforcement.

- **Bureau of Emergency Response.** The Bureau of Emergency Response is responsible for responding to any emergency incidents such as oil spills and hazardous material leaks that present an imminent hazard or threat to public health, welfare, safety, or the environment. This office handles both criminal and civil environmental enforcement to enhance the protection of state owned land maintained by the Department.

- **Bureau of Florida Marine Patrol**. The Bureau of Florida Marine Patrol provides marine law enforcement through its 5 district offices. They enforce environmental, marine resource, and boating safety laws, as well as special fishery laws of local application.

- **Division of Marine Resources**. This division is the salt water equivalent of the Game Commission's aquatic fisheries programs, including the Manatee protection program. The DEP is responsible for manatee protection and mammalian dolphins, including establishment of slow speed zones, idle speed zones, maximum speed zones, and motorboat-prohibited zones to protect manatees. The DEP administers marine sea turtle recovery plans for the FWS for the Atlantic loggerhead turtle, the Atlantic green turtle, the leatherback turtle, the Atlantic hawkbill turtle, and the Atlantic ridley turtle.

The staff support to the Marine Fisheries Commission, which reports directly to the Governor and Cabinet, is also contained within this division. The Marine Fisheries Commission, part of the DEP, has been delegated rule-making authority over marine life, with the exception of endangered species The DEP is responsible for management and preservation of the state's renewable fishery and shellfish resources including regulation of commercial and recreational fishing of saltwater finfish, snook, oysters, and clams.

The Division includes the Florida Marine Research Institute and the Bureau of Marine Resource Regulation and Development, the Bureau of Coastal and Aquatic Managed Areas, Office of Fisheries Management and Assistance Services, and the Bureau of Protected Species Management.

**The Florida Marine Research Institute (FMRI).** The Florida Marine Research Institute in St. Petersburg provides the biological and scientific information needed for management of Florida's marine and coastal resources, through studies of marine habitat, life histories of marine organisms, and studies of marine animal health and contamination.

**Bureau of Marine Resource Regulation and Development**. The Bureau of Marine Resource Regulation and Development develops programs for and regulates oyster reefs, oyster transplanting, shellfish leases, and water quality and shellfish sanitation.

**Bureau of Coastal and Aquatic Managed Areas.** The Bureau of Coastal and Aquatic Managed Areas administers the state's programs at the Florida Keys Marine Sanctuary, National Marine Sanctuaries (Key Largo and Looe Key) and National Estuarine Research Reserves (Rookery Bay and Apalachicola Bay), the state-owned and designated aquatic preserves, as well as buffer lands protecting estuarine and marine waters.

**Office of Fisheries Management and Assistance Services.** The Office of Fisheries Management and Assistance Services is the FDEP liaison to the Marine Fisheries Commission. It collects data on recreational fisheries, coordinates development of artificial reefs, and issues recreational and commercial salt-water fishing licenses and permits.

**Bureau of Protected Species Management.** The Bureau of Protected Species Management implements the state-federal endangered species programs for manatees, right whales, and marine turtles.

- **Division of Recreation and Parks**. This division maintains the state-owned multifaceted park and open space system. The Division of Recreation and Parks has developed and executed a comprehensive multipurpose outdoor recreation and conservation program for the state. This division is responsible for developing plans for, and acquisition of, outdoor recreational lands and environmentally endangered

lands. Division tasks include the operation and maintenance of recreation areas, development of interpretive and educational programs and exhibits on Florida history and natural resources, and administration of grant-in-aid programs for acquisition and development of outdoor recreation facilities by local governments.

- **Division of State Lands**. The DEP is the lead state agency for managing Florida's natural resources and state owned lands. This division oversees the interests of the state on its real property, with the exception of those properties maintained by the Department of Management Services (state buildings) or the Department of Transportation (state transportation facilities, including water conveyances). This division is responsible to the Trustees of the Internal Improvement Trust Fund for recommendations regarding state land purchases, leases or sales, and for recommending enforcement actions when state lands are being used without authorization.

  Florida has one of the largest and most extensive environmental land acquisition programs in the country. More than $200 million is appropriated each year to purchase environmentally sensitive lands through the Conservation and Recreation Lands and Preservation (CARL) 2000 (P-2000) programs. Lands are also acquired, by the Division, on behalf of other state agencies for uses such as universities, correctional, health and social services programs.

**Sovereign Lands Management**

Most of the provisions of *Chapter 253* are administered by the Department of Environmental Protection, Division of State Lands, which serves as staff to the Trustees. The Division is responsible for evaluating and processing all forms of requests for use of state owned lands. The agency provisions for managing activities on sovereignty submerged lands are found in *Florida Administrative Code, Chapter 18-21.*

Under the provisions of Florida Statutes, title to all submerged lands not previously conveyed by deed or statute is vested in the Board of Trustees of the Internal Improvement Trust Fund. The Trustees may sell or otherwise convey sovereign lands upon a determination that such sales are in the public interest. Though the definition of what constitutes the public interest is vague, public interest can partially be ascertained by determining whether a proposed sale or other conveyance would interfere with conservation of fish, marine and other wildlife, or other natural resources. It is highly unlikely that any sovereign land will be sold to private interests in the foreseeable future. All conveyances of sovereignty submerged lands are subject to public servitude for navigation, commerce, and general use of the overlying waters. There appear to be no exceptions from the Trustees' authority to require some form of consent to use or occupy state owned lands. Revenues derived from user fees are

deposited in the Internal Improvement Trust Fund and are then used for the acquisition, management, administration, protection, and conservation of state owned lands. Specifically, revenues support the operation of the Division of State Lands within the Department of Environmental Protection.

The Trustees are charged with the duty of managing state owned lands to provide the greatest combination of benefits for the people of the state. These duties include the acquisition, administration, management, control, supervision, protection, enhancement, and disposition of all sovereignty lands, with certain exceptions. As part of this administrative process, the Trustees are required to develop a comprehensive plan for the acquisition, management, and disposition of state lands in order to ensure their most beneficial use.

**Aquatic Preserves Management**

By enacting the *Florida Aquatic Preserve Act of 1975*, the legislature officially declared that certain state-owned submerged lands having exceptional biological, aesthetic, and scientific value be set aside forever as aquatic preserves or sanctuaries for the benefit of future generations. The Estero Bay Aquatic preserve is unique in being the first of a number designated in the greater Charlotte Harbor estuarine system. Other include Cape Haze, Gasparilla Sound-Charlotte Harbor, Pine Island Sound and Matlacha Pass. The Governor and Cabinet, sitting as the Board of Trustees of the Internal Improvement Trust Fund, are charged with managing all aquatic preserves pursuant to the maintenance provisions of *Florida Statutes 258.42.* These conservation-oriented guidelines subject all activities upon sovereignty lands within aquatic preserves to the following standards:

- No sale, lease, or other transfer of sovereignty of submerged lands is permitted unless the conveyance is in the public interest.
- New construction of seawalls and disposition of fill waterward of the mean or ordinary high water line is prohibited. Public road and bridge projects may be excepted if no reasonable alternative exists. Seawalls may be repaired or replaced if within 18 inches of the original seawall and no destruction of benthic communities adjacent to the area may occur.
- Dredging and filling activities are generally prohibited, subject to limited exceptions for creation and maintenance of public navigation projects, maintenance and access to marinas, land restoration projects authorized by *Florida Statutes 253.124(8)*, installation of oil and gas transportation facilities, and other activities deemed necessary by the Trustees to enhance the quality or utility of the preserve or the public health.
- Dredging waterward of the mean or high water line, for the sole purpose of providing upland fill, is prohibited.
- Drilling for oil or gas is prohibited.

- No excavation of minerals is permitted.
- No erection of structures is permitted, except for private docks that allow ingress and egress to riparian owners, commercial docking facilities shown to be consistent with management criteria of the preserve, and structures for shore protection, navigation, aids, or public utility crossings. No structures will be prohibited solely because a local government failed to adopt provisions for the siting of these facilities within its comprehensive plan.
- No wastes or effluents may be discharged into a preserve if such discharge would substantially inhibit the accomplishment of the purposes of the *Aquatic Preserve Act*.

Notwithstanding the above provisions, the act specifically protects traditional riparian rights of ingress and egress of upland property owners adjacent to or within the preserves. The Division of State Lands provides staff management of the aquatic preserves on behalf of the Trustees. Management decisions regarding sovereignty lands within aquatic preserves are generally made pursuant to the established goals of maintaining or enhancing natural conditions within the preserves. The Bureau of Coastal and Aquatic Managed Areas administers the preserves through the implementation of a comprehensive, preservation-oriented management program. All proposed activities in aquatic preserves, which have adopted management plans, must demonstrate consistency with the plan.

- **Division of Waste Management**. This division oversees the state's program for permitting biohazardous and general solid waste disposal, whether through landfill or incineration. It also manages grants programs established for these purposes. The county-based hazardous waste programs are coordinated through this division. The Division of Waste Management implements state and federal laws relating to solid and hazardous waste management, and regulates construction and installation of above- and below-ground pollutant storage tanks. It is responsible for cleanup of hazardous waste and pollutant spill sites. The division has three bureaus: Waste Cleanup, Solid and Hazardous Waste, and Petroleum Storage Systems.

  **Bureau of Waste Cleanup**. The Bureau of Waste Cleanup is responsible for all activities relating to the cleanup of sites contaminated by hazardous wastes or other pollutants.

  **Bureau of Solid and Hazardous Waste**. The Bureau of Solid and Hazardous Waste is responsible for the proper planning for and management of solid and hazardous waste in Florida. Operations range from waste reduction and pollution prevention to recycling programs, permitting of solid waste management facilities, and review and permitting of hazardous waste storage, treatment, and disposal facilities.

**Bureau of Petroleum Storage Systems**. The Bureau of Petroleum Storage Systems is responsible for all activities relating to the cleanup of sites contaminated by petroleum products, or other pollutants, and for the regulation of above- and below-ground pollutant storage tanks.

- **Division of Environmental Resource Permitting**. This division oversees the state's dredge and fill program, and the storm water discharge program from waste water treatment facilities. This division also oversees the state's beaches and pass maintenance programs.

  The DEP issues General Permits for the classes of activities that include domestic wastewater facilities, wetland resource management (dredge and fill), stormwater discharges, solid waste facilities, and hazardous waste facilities. These permits authorize certain activities that cause minimal adverse environmental impacts when performed in accordance with permit criteria.

  The industrial siting rule provides for an optional, effective, centrally coordinated permitting review and determination process for industrial, commercial, wholesale, or retail projects which are consistent with natural resource and environmental protection. The process includes considerations of project location, construction, and facility operations acceptable with planned growth and development.

  The DEP certifies the siting, construction, or expansion of electric power facilities and transmission lines. The certification process includes a review of need associated with increased electric power generation and the effects of generation-related activities on human health and the environment and ecology of the lands and waters within the state.

- **Division of Water Facilities**. This division oversees the quality of the state's public and private drinking water utilities. It also oversees domestic and industrial waste water treatment and reuse/disposal of treated waste waters on land and into surface waters. The DEP has established surface water quality standards, thermal surface water criteria, water quality effluent limitations, standards for reuse of reclaimed water and land application of domestic wastewater, as well as those for feedlot and dairy wastewater treatment. The Division of Water Facilities also administers programs to help ensure Florida's safe drinking water supply. This division oversees the construction and operation of drinking water treatment facilities and domestic and industrial wastewater treatment plants and administers the state's reclaimed water reuse and ground water protection programs. The Division has six bureaus: Water Resources Protection, Water Facilities Funding, Water Facilities Regulation, Mine Reclamation, Beaches and Coastal Systems, and Submerged Lands and

Environmental Resources. The latter bureau oversees the environmental resource permit (ERP) program.

**Bureau of Water Resources Protection**. The Bureau of Water Resources Protection ensures that Florida's drinking water is available and safe through development of ground water quality standards; performing water quality assessments including chemistry, flow, bioassessment, and sediment analyses; and assists in the development of management practices for non-point sources of pollution, including stormwater, agricultural and industrial runoff.

**Bureau of Water Facilities Funding**. The Bureau of Water Facilities Funding provides financial and technical assistance to local governments to help with construction of needed wastewater treatment facilities.

**Bureau of Water Facilities Regulation**. The Bureau of Water Facilities Regulation administers the Department's rules for proper industrial and domestic wastewater treatment, manages the federal and state drinking water programs, the reclaimed water reuse program, and implements the Federal National Pollutant Discharge Elimination System (NPDES) and Underground Injection Control programs.

**Bureau of Mine Reclamation**. The Bureau of Mine Reclamation administers the programs that oversee mine permitting, reclamation and restoration, and safety for phosphate, limestone, heavy minerals, sand and clay mining in the state.

- **Division of Technical Services**. This division provides biological, hydrological, and hydrogeological review for point and nonpoint source surface and groundwater permits, monitoring plans, and issues. This division also houses the Surface Water Assessment and Monitoring Program (SWAMP) and the Underground Injection Control (UIC) program, which permits and regulates injection wells. The Bureau of Geology is also within this division.

- **Environmental Standards -** The Florida Environmental Regulation Commission is the rule-making arm of the department for rules that establish environmental standards, such as the department’s water body classifications and its air and water quality standards. The Commission’s membership is composed of seven citizens of the state appointed by the Governor, subject to confirmation by the Senate for four-year terms. Members are selected from within the boundaries of the five Water Management Districts, with no more than two members from any one District. Membership is representative of the many diverse economic and social interests in the state.

- **Ecosystem Management, Water Policy, and Surface Water Improvement and Management.** Office of Water Policy supervises the five Water Management District liaisons (one in each District) who assist the Florida Department of Environmental Protection in communicating and coordinating with the Districts on water policy issues related to regulatory and non-regulatory (SWIM) environmental protection programs

### 5.2.4 Department of Health (DOH)

*Applications, Permits, and Requirements for Public Bathing Places; s. 10D-5, F.A.C.*
*Standards for Onsite Sewage Disposal Systems; s. 10D-6, F.A.C.*

The Department of Health was recreated by the 1996 Legislature to focus on health problems. The DOH issues permits for development and operation of public bathing places on any waters of the state. Approval may be based on a sanitary survey of the bathing place which could include a bacteriological survey, assessment of existing and future water quality, and an evaluation of the maintenance of the onsite sanitary facilities. The DOH establishes rules and regulations with regard to installation, function, and maintenance of onsite sewage disposal systems (e.g., septic tanks).

Of particular interest is the Department's focus on environmental health and entomological services. The former function directly issues approvals to domestic septic systems through the County Health Department, and shellfish safety evaluations. The latter function oversees "vector" control, most commonly through the various mosquito control activities of local government or special districts. Of unique importance is the Department's biohazardous waste program, which oversees the proper disposal of disease-causing materials.

### 5.2.5 Department of Transportation (FDOT)

*Fishing and Boating Facilities at State Road System Bridges; Chapter 14-41, F.A.C.*
*Bridge Inspection Standards; Chapter 14-48. F.A.C.*
*Drainage Connections; Chapter 14-86, F.A.C.*
*Florida Highway Beautification Council; Chapter 14-92, F.A.C.*
*Florida Seaport Transportation and Economic Development Council, Rules of Procedure; Chapter 14B-1, F.A.C.*

The Department of Transportation oversees the statewide transportation system, which includes roads, ports, airports, railroads, pipelines and mass transit. The FDOT maintains drainage for these roadways. The Department prepares the statewide Transportation Plan through its Assistant Secretary for Transportation Policy. Departmental operations are carried out through substate districts.

DOT provides rules with regard to the participation in the location, design, construction, and maintenance of fishing and boating facilities located on, or on the immediate right-of-way of state road system bridges.

DOT provides bridge inspection standards including minimum inspection and inventory requirements, procedures for reporting bridge inspection, criteria for approval of bridge inspector training courses, and minimum qualifications for performing bridge inspections.

DOT provides for the safety conditions of transportation facilities. It is also responsible for the prevention of unreasonable burden on lower properties by providing standards and procedures for drainage connections from the properties adjacent to DOT right-of-way.

The Beautification Council administers the state highway beautification program that establishes criteria for grant applications and maintenance of projects. Projects, for example, are assessed on the use of native or naturalized plants, the use of wildflowers, irrigation practices, and environmental considerations.

Finally, DOT is responsible for the review, application, approval process, and requirement for funding for eligible port transportation projects. Funding is provided by the Florida Seaport Transportation and Economic Council. Eligible projects include: dredging or deepening of channels, turning basins, or harbors; construction or rehabilitation of wharves, docks, structures, jetties, piers, storage facilities, cruise terminals, etc.; and environmental protection projects as defined in s. 376.22, F.S.

### 5.2.6 The Florida Game and Fresh Water Fish Commission (GFC)

*General Prohibitions and Requirements; Title 39, F.A.C.*
*Article IV, Section 9, Florida Constitution*
The *Wildlife Code of the State of Florida (Chapter 39, Florida Administrative Code)*
The *Florida Panther Protection Act (Chapter 372, Florida Statutes)*
*T*he *Florida Manatee Sanctuary Act (Section 370.12, Subsection 2, Florida Statutes)*
*T*he *Marine Turtles Protection Act (Section 327.25, Florida Statutes)*
*T*he *Feeding or Enticement of Alligators or Crocodiles Act (Section 372.667, Florida Statutes)*
The *Alligators/Crocodilia Protection Act (Section 372.663, Florida Statutes)*

The GFWFC is responsible for implementation of the rules and regulations regarding the protection and management of wild animal life and fresh water aquatic life through biological programs and a strong law enforcement program. The Florida Game and Fresh Water Fish Commission is unique through its treatment in the Florida Constitution. The Commission's five members are appointed by the Governor, and confirmed by the Senate. Its budget is largely provided by fees that are approved

by the Legislature. Its Executive Director is appointed by the Commission. The Commission operates within five geographical regions with substate offices and is organized into Divisions of responsibility. The most relevant of these include:

- **Division of Law Enforcement** enforcing rules for wildlife and freshwater aquatic life protection, including habitat.

- **Division of Wildlife** developing and pursuing wildlife management plans and practices for the many Florida species needing conservation.

  **Division of Fisheries** conserving aquatic life through plans and practices.

- **Office of Environmental Services** maintaining and enhancing fish and wildlife habitat.

- **Office of Informational Services** providing public information role regarding the Commission, the resources, and the need for conservation of fish and wildlife and their habitats.

**Fish, Game, and Wildlife Management**

GFC regulates game and fish according to state law and reviews wildlife and resource issues under the authority of the U.S. Department of the Interior, *Fish and Wildlife Coordination Act*. The GFC does not restrict its role to regulatory issues only; it also provides written guidelines for reducing the impacts of development on wildlife species such as the burrowing owl, gopher tortoise, Southeastern American kestrel, Florida scrub jay, and wood stork and bald eagle (cooperative guideline with U.S. Fish and Wildlife Service). In addition, the Office of Environmental Services of the GFC reviews state, regional, and comprehensive plans, Developments of Regional Impacts (DRIs), seismic permits, clearinghouse projects, and some dredge and fill projects.

Habitat protection law in the state of Florida centers around wetland protection. No state upland habitat protection law exists, even for listed species. Federal protection of the habitat of some federally-listed species has resulted from policy and case law. However, protection under these scenarios is usually limited to endemic species with restricted ranges and habitat use (such as the Florida scrub jay). Although most federal, state, and local habitat protection measures incorporate general fish and wildlife or listed species concerns, the majority of upland or non-listed wildlife species receive no protection under current wetland protection rule or policy. The result is over-emphasis of a single-issue component of south Florida's ecosystem, which does nothing to maintain or improve biodiversity.

## 5.3 Regional Programs & Regional Entities

Regional programs and entities responsible for environmental and natural resource regulation, management, and planning within the Estero Bay Watershed are described in the following chapters.

### 5.3.1 Water Management Districts

Water Management Districts (WMDs) were initially established in specific parts of the state to address flood protection issues. The Water Resources Act of 1972, however, provided regularity and statewide coverage by these Districts. Further, in 1976 a Constitutional amendment provided these districts ad valorem taxing powers. This action, in turn, led the Legislature to regularize District powers and duties and to ensure that all parts of the state were in a designated district, whose boundaries were established by the legislature.

> ***Florida Statutes Chapter 298,*** **Water Control Districts**
> *General Drainage Law of 1913, Chapter 298, F.S.*

Drainage districts were established with the passage of the General Drainage Law in 1913 for promotion of agricultural activities through drainage, irrigation, and water management of all lands within defined districts. Until 1979, the FDER or owners of a contiguous land area that is subject to flooding could petition the circuit court to form a water control district. Section *298.01, F.S.* was amended in 1980 to eliminate the creation of districts by petition, such that, by July 1980, districts could only be created by a special act of legislature or pursuant to *Section 125.01, F.S.* Districts created prior to July, 1980 are known as "independent districts", and those created since 1980 are known as "dependent districts". Independent districts are reviewed by the DEP. Dependent districts are under the authority of local governments and are not regulated by Chapter 298. Both the DEP and the SFWMD permit water control district activities within the project area of the Estero Bay Watershed.

Chapter 298 districts, as summarized by the Soil Conservation District in 1993 (USDA SCS, 1993), enable their landowners to tax themselves to provide funds to maintain (or construct) canals, pumps, and other flood control structures. Each water control district, however, must obtain the appropriate permits from the DEP or the SFWMD for surface water management, consumptive use, and any other permit pertinent to their operation. A Board of Supervisors in each district has authority to operate and maintain the water control district, which includes authority for the management of surface waters and water courses within its district boundaries.

Some districts have appointed a chief engineer who is responsible for development of a report on the drainage or reclaiming of land to prevent overflow or damage to the land. The report may be adopted as the water management plan, in which case a copy of the district's water management plan must be submitted to the DEP for review every five years.

Since most water control districts were established in the mid-1900s, they are gravity drained and have been grandfathered under the 1977 ruling under the water management districts, and thus do not require water management and storage permits.

The 1980 Legislature passed several acts to limit, if not prohibit, the creation of independent special districts in Florida. By adopting the *Uniform Community Development District Act of 1980*, codified as *F.S. Chapter 190*, the legislature intended to provide a uniform method for building community developments through the establishment of community development districts. "Community development districts" are defined as local or regional units of special-purpose government limited to the performance of specialized functions authorized by *F.S. Chapter 190.*

In a related legislative development, the creation of water control districts pursuant to *F.S. Chapter 298* was prohibited, except pursuant to *F.S. 125.01*, or a special act of the legislature (*F.S. 298.01 of 1980*). The districts established before July 1, 1980 were permitted to operate as outlined in *F.S. Chapter 298.*

The districts are supervised by an elected Board of Supervisors and are treated like a quasi-public corporation with only those powers specifically granted to them by statute (*Forbes Pioneer Boat Line v. Board of County Commissioners, 77 Fla. 742, 82 So. 346, 1936*). The Governing Board has the power of eminent domain, the power to levy taxes and borrow money, and the power to issue bonds (*F.S. 298.22, 298.23, 298.47*). The Governing Board is also authorized to hire a chief engineer to develop a master drainage and reclamation plan for the district. A circuit court hearing then is held on the plan (*F.S. 298.34*). If the plan is approved, the Governing Board is empowered to implement the plan through construction and maintenance (*F.S. 298.35*).

***Florida Statutes Chapter 373,* Water Management Districts**
*General and Procedural Rules; Chapter 40E-1, F.A.C.*
*Consumptive Use; Chapter 40E-2, F.A.C.*
*Water Wells; Chapter 40E-3, F.A.C.*
*Surface Water Management; Chapter 40E-4, F.A.C.*
*Artificial Recharge; Chapter 40E-5, F.A.C.*
*Works of Lands of the District; Chapter 40E-6, F.A.C.*
*Water Management Lands Trust Fund; S. 40E-7111. F.A.C.*
*Real Property Acquisition and Disposal; Chapter 40E-9, F.A.C.*
*General Surface Water Management Permits; Chapter 40E-40, F.A.C.*
*Environmental Resource Permit; Chapter 62-341, 62-330, F.A.C.*

Contrasted with the Water Management (drainage) Districts (WMDs) formed pursuant to *Chapter 298 F.S.* are the five multipurpose water management districts statutorily created by *Chapter 373 F.S.* These Districts fit within the statutory definition of a "state agency" in *Chapter 120.52(l), F.S.* and are subject to the procedural requirements of *Chapter 120 F.S.*

A Governing Board, who reside within the district and are appointed by the Governor, controls each district. The Boards are authorized to clean out, straighten, enlarge, or change the course of any waterway, and to provide such canals, levees, dikes, dams, sluiceways, reservoirs, holding basins, floodways, pumping stations, bridges, highways, and other works and facilities that the Board deems necessary. The Board also can establish, maintain, and regulate water levels in all canals, lakes, rivers, channels, streams, or other bodies of water owned or maintained by the WMD, and can hold, control, and condemn land (*F.S. 373.086*). To finance these activities, the Districts may obtain funds from the following sources: (1) direct state appropriations from the general revenue fund; (2) permit application fees; (3) ad valorem taxes; and, (4) issuance of bonds.

The Estero Bay Watershed lies within the boundaries of the South Florida Water Management District (SFWMD), which has authority to manage and protect surface waters and groundwaters within its boundaries. The SFWMD has a wide range of permitting authority which includes: management and storage of surface waters; withdrawal and consumptive use of surface and groundwater; and wetland and dredge and fill activities.

In addition to permitting functions, the SFWMD manages surface and groundwaters through a variety of regulatory practices and programs to provide funding for local government projects and research programs. The SFWMD manages within its jurisdiction through regulation of agricultural discharges and operation of major water control structures that were originally constructed by the federal government for flood control. The SFWMD is also involved in water resources research, water supply planning, water quality assessments, management plan development, and public education.

*State Water Policy (Rule 62.40.420(2), F.A.C.)* has given state water management districts the responsibility to act as chief administrators of the state stormwater management program.

The Districts and DEP have alternative permitting authority in a number of areas relating to water use, such as consumptive use permitting, regulation of wells, and management and storage of surface waters. In large part, DEP has delegated its permitting authority to the Districts pursuant to rule. This is consistent with the legislature's intent that DEP delegate appropriate powers to the greatest extent practicable (*F.S. 373.016(3)*).

The Florida Water Policy and the Florida Water Plan give the Department of Environmental Protection "general supervisory authority" over the state's water management districts, and directs the department to delegate water resources programs to them where possible. Pursuant to these delegations, the Districts are authorized to administer flood protection programs, to perform technical investigations into water resources, to develop district water management plans, including water shortage plans for times of drought, and to acquire and manage lands for water management purposes under the Save Our Rivers program.

Regulatory programs delegated to the districts include programs to manage the consumptive use of water, aquifer recharge, well construction, and surface water management. As part of their surface water management programs, the districts in the study area administer the Department's stormwater management and the Environmental Resource Permitting (ERP) program. The districts also help with the development of the water elements in local government comprehensive plans.

Important legislative amendments include the addition of *Chapter 373.019(15) F.S.*, which defines "Works of the District." This phrase extends permitting authority to those projects or works, including but not limited to structures, impoundments, wells, streams, and other water courses, together with the appurtenant facilities and accompanying lands that have been officially adopted by the Governing Board as works of the District.

**District Water Management Plans**

Water Management Districts have been charged with the preparation of a District Water Management Plan (DWMP) consistent with the requirements of *Chapter 373.036, Florida Statutes* and *Section 62-40.501, Florida Administrative Code*. The DWMP represents the Water Management Districts first comprehensive examination of the myriad of issues regarding water supply, flood protection, water quality, and natural systems management within their regions. The policies, programs, and activities of the Districts reflect the multi-functional nature of water resource management in this unique environment.

The Florida Department of Environmental Protection, in conjunction with the Water Management Districts, outlined the requirements for preparation of the DWMP through the development of a "Format and Guidelines" document. The "Format and Guidelines" were developed to ensure that all five plans follow a consistent format so readers can easily compare the issues and approaches of the Districts on a given issue. Accordingly, the DWMPs are organized to reflect the four areas of responsibility of each of the Water Management Districts - water supply, flood protection, water quality, and natural systems management. While the "Format and Guidelines" may facilitate comparison of the plans of each of the Water Management Districts, it may not adequately reflect the interrelated nature of these areas of responsibility. For example, the solution to a flood protection problem may provide an opportunity to improve a water supply problem and will most likely involve water quality issues.

The DWMPs are intended to provide comprehensive long range guidance for the actions of the Water Management Districts in implementing their responsibilities under state and federal laws. As such, the policies in the DWMPs should be considered as a whole, not individually. Given the comprehensive nature of the DWMPs, it may be considered as analogous to a local government comprehensive plan. Like the local governments' plans, the DWMPs are intended to serve as a direction-setting document. It defines the policy framework within which the priorities and directions for future district planning and implementation activities will be set.

The DWMPs are guided by the policies of the "State Comprehensive Plan," *Chapter 187, F.S.*; the *Florida Water Resources Act, Chapter 373, F.S.*; the *Air and Water Pollution Control Act, Chapter 403, F.S.*; and "State Water Policy," *Chapter 62-40, F.A.C.* These statewide laws and regulations are translated by the Districts through their mission statements and Vision 2050 into the DWMP. The DWMP, through its establishment of schedules and policies, provides direction for the District's strategic plans, which is used to direct resources for the agency's other planning efforts (water supply plans, SWIM plans, and basin plans). The results of these plans are then used to direct implementation activities.

As important as serving as a direction-setting document for the districts, the DWMPs are a communication tool. As such, they play a role in Florida's growth management process. The DWMPs also should be considered as a source of technical information for local governments seeking guidance on water resource issues of concern within their jurisdictions.

The DWMPs are not intended to be self-executing documents. The general policy directives described in the DWMP provide the district's interpretation regarding State Water Policy. These policies are not rules of the districts, though they should be used to direct the district's future rule making efforts, and existing rules should be evaluated for consistency with the policies described in this plan. District rules should then be considered one of several tools for implementing the DWMP. Other implementation tools might include additional planning, research, operations and maintenance, and land acquisition.

**Surface Water Management Permitting**

The districts have adopted Management and Storage of Surface Waters Permitting (MSSW) Rules to regulate the construction and operation of surface water management systems associated with new development. These rules are designed to manage the potential surface water quantity and quality impacts, wetland impacts, and flood plain impacts of new development in the Districts.

Criteria have been developed for both closed and open surface water basins and are designed to minimize adverse impacts to water resources and attenuate any increase in downstream flooding. In open basins, the quantity criteria focus on the rate of discharge from the development site, while in closed basins the volume of total discharge is addressed. The MSSW also require that land development within the 100-year flood plain have no adverse impact on water storage (i.e., fill within the flood plain must be compensated by creating equivalent storage) and not impede water flows. In addition, the basis of review for Surface Water Permitting contains criteria for wetlands, water quality, floodplains and conservation issues. MSSW permitting is administered in conjunction with "dredge and fill," or environmental resource permitting.

As a result of legislative changes in 1993, the districts are substantially revising their surface water permitting rules. In an effort to streamline environmental permitting, the Florida legislature directed

the water management districts and the Department of Environmental Protection to develop new regulations that would combine several types of permits into one "Environmental Resource Permit" or ERP. The ERP rule will eventually supersede the MSSW rules discussed in this section. The District Governing Boards are in the process of adopting ERP rules, but a number of rule challenges have been filed and it may take up to one or two years before these appeals are resolved and the rules take effect.

**"Works of the District" Permitting**

Water Management Districts have also adopted rules for "Works of the District." The purpose of these rules are to protect certain "declared" Works of the District from actions which would impair their capacity to accomplish the purpose for which they were intended. Declared Works for the South Florida Water Management District include components of the Central and Southern Florida Flood Control and Golden Gate Canal Systems. Furthermore, most flood control structures and other facilities owned, operated, or otherwise controlled by the districts are "Declared Works of the Districts." The rules allow the districts to regulate any activities which would connect to, withdraw water from, discharge water into, place construction within, or otherwise make use of a Declared Work. Due to the more comprehensive nature of the district's MSSW rules, activities involving district works are regulated through these rules, whenever possible.

**Wetlands Protection**

One way the Water Management Districts achieve wetlands protection is through regulatory programs. The District's surface water permitting rules require that any impact to wetlands not specifically exempted must either be avoided or compensated. Compensation for impacts include, as a minimum, type-for-type mitigation at a one-to-one ratio. Other types of compensation may be required, including preservation of associated upland areas, alternate types of wetland creation, protection of exempt wetlands, and restoration of previously impacted wetlands. The intent is to ensure that the habitat necessary for the survival of fish and wildlife is maintained.

Rules are currently being revised as a part of the statewide Environmental Resource Permit (ERP) rule development process. These new rules will combine existing Surface Water Management (MSSW) rules and the Wetlands Resource Management (WRM) permitting rules of the DEP. As stipulated in the *Environmental Reorganization Act of 1993*, these rules will include a single definition for wetlands, a unified methodology for wetland delineation, and criteria for the establishment and use of mitigation banks. As noted in the Flood Protection chapter, the Water Management District's Governing Boards have moved to adopt the ERP rule but have received administrative challenges that must be resolved before the rule can take effect.

Rules also address minimization of impacts to natural systems. One of the criteria for water use permitting is limitation of drawdowns in the surficial systems and controlling impacts to wetlands,

lakes, and streamflow, all of which contribute to the protection of associated natural systems. Rules regulate well depth and casing requirements in order to prevent drawdowns and possible contamination.

**Land Acquisition and Management**

It is widely recognized that public ownership is one of the most effective means of preserving Florida's remaining natural systems and their associated water resource benefits. The Water Management Districts, through the course of their local and regional water management activities, have undertaken the acquisition of lands for a broad spectrum of water resource protection and management benefits. These have included: flood protection; water quality protection and improvement; water supply development; protection of recharge areas; protection of wetland systems (such as headwater swamps and floodplains); and, restoration and management of uplands.

Land acquisition at the Districts is guided and funded by two major statewide initiatives: The Water Management Lands Trust Fund (Save Our Rivers or SOR), and Preservation 2000 (P-2000). These programs target the protection of natural resources at the local and regional level. Lands of importance to water resources and water management are acquired along with lands of unique environmental values endangered by development activities. The District owns over 204,000 acres, the majority of which were purchased through the SOR and P-2000 programs. The balance of this subsection provides a brief overview of the District's land acquisition, planning, and management efforts.

**Save Our Rivers Program**

The 1981 Florida Legislature enacted the Save Our Rivers program, thereby creating the Water Management Lands Trust Fund. The Trust Fund is administered by the Department of Environmental Protection (DEP) and funded from the Documentary Stamp Tax. The legislation enables the Water Management Districts to acquire lands necessary for water management, water supply, and the conservation and protection of water resources. All land to be acquired must be included in a five-year land acquisition plan. The program was amended in 1990 to require Water Management Districts to identify lands needed to protect or recharge ground water as necessary to protect water supplies. Such lands shall also serve to protect other valuable natural resources and/or provide space for natural resource-based recreation.

A significant amendment in 1986 allowed for the use of up to ten percent of the funds for management, maintenance, and capital improvements, including, but not limited to, habitat protection and wildlife conservation, prescribed burning, restoration, fencing, road and bridge maintenance, and recreation. This allocation was increased in 1992 to 15 percent. Making funds available for management is essential to maintain and protect natural resources, once acquired, in accordance with the legislative mandates of the SOR program.

### Aquatic Plant Management

The protection and preservation of natural aquatic systems, especially the native plant communities they support, cannot be accomplished without effectively managing exotic aquatic plant species. Because of their rapid growth rates and competitiveness, introduced species, such as water hyacinth, water lettuce and hydrilla reduce the abundance and diversity of native plant populations, affecting fish and wildlife habitat and interfering with recreational utilization of surface waters. Unmanaged growth of these invasive species can degrade water quality, impede flows, and increase sedimentation rates.

Aquatic plant management operations on natural waters are funded and/or coordinated with the Department of Environmental Protection, the GFC, the U.S. Army Corps of Engineers, and local government agencies since this operation also provides recreational, water quality, and habitat preservation benefits. The District's Basin boards also provide funding where appropriate.

### Surface Water Improvement and Management (SWIM)

The *SWIM Act of 1987* was enacted in response to growing concerns of the legislature and others over continuing declines in water quality within the state's regionally significant surface water bodies and associated degradation of natural systems. The act mandated that priority be given to Tampa Bay and its tributaries, as one of the eight water bodies identified in the enabling legislation. The act also mandated that each of the five Water Management Districts prepare and submit a prioritized list of water bodies of regional or statewide significance within their boundaries.

The SWIM process calls for preparation of management plans for each priority water body. SWIM plans are action-oriented documents, not summaries of issues or policy, intended to serve as a guide to restoration and protection efforts for the priority water bodies. Management plans have been adopted for all nine of the priority water bodies.

The SWIM Department of the Southwest Florida Water Management District is involved in a wide range of activities to implement its mission and plans. Tampa Bay has been the focal point of the District's SWIM program activities, having been identified as the number one priority water body for preservation and restoration. Significant research, resources, and remedial actions have also been directed at the District's other ranked priority water bodies. The SWIM Program has undertaken a wide variety of activities, including environmental assessments, urban stormwater analyses, seagrass mapping and habitat restoration, model ordinance development, wildlife assessments, and lake rehabilitation like that at Banana Lake in Polk County.

It is expected that as ranked waterbodies are successfully addressed by the SWIM Program, additional surface water bodies will be added. The Districts are presently required to periodically review SWIM priorities. The process to accomplish such additions will build on government agencies since this operation also provides recreational, water quality, and habitat preservation

benefits. The District's Basin Boards also provide funding where appropriate. No SWIM activities are currently underway within the South Florida Water Management District portions of the study area, however, initial studies are underway in preparation for future SWIM programs.

### 5.3.2 Special Water Drainage & Control Districts

Historically, a number of special Districts have been established in the Estero Bay Watershed to address flooding problems within the Estero Bay Watershed. Those within the study are listed in Table 5-4.

**Table 5-4. Districts In or Near Estero Bay Watershed Study Area**

| DISTRICT | YEAR ESTABLISHED | FL STATUTE | LOCATION |
|---|---|---|---|
| Iona Drainage District | 1916 | 298 | South Ft. Myers |
| East County Water Control District | 1958 | 63-1549 | Lehigh Acres |
| City of Ft. Myers | N/A | N/A | Ft. Myers |
| East Mullock Drainage District | N/A | 63-030 | San Carlos Park |
| Estero Water Management District | 1972 | N/A | Dissolved in 1976 |
| Green Meadows Drainage District | 1970 | N/A | Between SR 82 and Corkscrew Grade |
| Gateway Service District | 1986 | 190 | Between 1-75, Daniels Parkway and SR 82 |
| San Carlos Estates Drainage District | N/A | 298 | Near Bonita Springs |
| East Bonita Drainage District | N/A | 298 | Southeastern Lee County |
| Naples Drainage District | 1977 | 298 | South Lee/Collier County |

### 5.3.3 Big Cypress Basin Board

The mission of the Big Cypress Basin Board is to manage water resources for the public's health, safety and welfare. The primary elements which comprise this mission are centered around:

- water supply,
- environmental protection and enhancement,
- water quality protection and flood protection.

The following activities represent the primary goals of the Big Cypress Basin Board:

- identify, qualitatively and quantitatively, water resources available in the Basin;

- develop plans for conservation, preservation and development of water resources;
- conduct efficient operation and maintenance activities upon existing Basin water management facilities;
- undertake construction of Basin works to facilitate water resources management;
- carry out administrative actions for existing facilities;
- monitor water resource related data; and
- assist other public entities' efforts in management of water resources in the Basin .

### 5.3.4 Regional Planning Councils

**Southwest Florida Regional Planning Council (SWFRPC)**

| Regional Comprehensive Policy Plan: Regional | |
|---|---|
| **Issue** | **Policy Element** |
| 38 | Protection of Water Resources |
| 39; 43 | Protection of Natural Systems |
| 40 | Protection of Coastal Resources |
| 41 | Protection of Marine Resources |
| 44 | Protection of Endangered Species |
| 45 | Land Management and Use |
| 46 | Parks and Recreation |

Regional Planning Councils were originally established throughout the State through interlocal agreements among local governments. These agreements are still in effect for the signatory local governments, but in 1980 state law regularized these Councils to perform the same basic powers and duties and to require all counties to be a member of a regional planning council. This legislation has been periodically revised, but is still oriented towards the same basic mission of multifaceted intergovernmental coordination.

The Southwest Florida Regional Planning Council (SWFRPC) was formed in 1973 and is composed of six counties and 21 cities, with a governing board (the Council) of 31 members. The Estero Bay Watershed border encompasses 3 of these counties and two cities. The Council has a strategic regional policy plan, has responsibilities for local plan reviews and technical assistance, has an active emergency preparedness plan, and has programs for transportation, hazardous materials and waste, housing, economic development and natural resource protection. It has the major role in reviewing large development proposals, known as DRIs, within its region. It is the designated permit clearinghouse review agency by the Office of the Governor. In 1978, the Council provided staff

services to the Governor's Resource Planning and Management Committee for the greater Charlotte Harbor estuarine system, and has been assigned the ministerial role in using the plan for project reviews ever since.

**Strategic Regional Policy Plans**

Each regional planning council is responsible for the preparation of a Strategic Regional Policy Plan (SRPP), pursuant to *Chapter 186.507, F. S.* These plans must contain elements that address the region's human and natural systems. In general, the natural systems element of the SRPP addresses the region's natural resources with goals, objectives, and policies for the protection and management of the region's natural resources. Council review and comment on various projects within their area of jurisdiction uses the SRPP as the guiding document. Each Regional Planning Council SRPP also includes a requirement that the region's Regionally Significant Natural Resources be listed and mapped at a scale of 1:100,000. Local Government Comprehensive Plans must be consistent with the SRPP.

**Development of Regional Impact Review Process**

The Development of Regional Impact (DRI) review process is a coordinated review process involving local, regional, state, and federal agency review of large scale long-term buildout projects that have multi-jurisdictional impacts, due to their character, magnitude, or location. The Regional Planning Councils are charged to coordinate the DRI process pursuant to *Chapter 380.06 F. S*. The DRI review process addresses a project's impacts to the region's infrastructure, economy, and natural resources. Projects must analyze their impacts and how they will mitigate impacts to surface and ground waters, public water, wastewater systems, vegetation, and wildlife habitat. Local governments are charged to issue a Development Order approving or denying a project. Any project approval must contain conditions for the mitigation of impacts or be subject to appeal by the Department of Community Affairs.

**Intergovernmental Coordination and Review**

The purpose of the intergovernmental coordination and review process is to ensure that projects being reviewed for permitting or funding by higher levels of government are consistent with the Strategic Regional Policy Plan and the comprehensive plans of the local governments in the region. Under this process, members of the Council are provided an opportunity to review and comment on these projects. Reviews are also undertaken for coastal issues, as will be noted in the discussion of the coastal management program.

**Water Quality**

The Southwest Florida Regional Planning Council became a designated Areawide Water Quality Planning Agency on March 27, 1976, pursuant to *Section 208* of the *Federal Water Pollution Control Act Amendments of 1972* (P.L. 92-500). The 208 Water Quality Management Plan prepared

for this program was approved in August 1978. The plan identifies the agencies (federal, state, regional, county or city) necessary to implement the plan; implementation requires a combination of all levels of government regarding the regulation of point and nonpoint sources. The regulation of point sources requires coordination between local governments, wastewater treatment agencies, and other agencies with public works authority. Nonpoint source regulation, however, is much more extensive and requires coordination between agencies involved with land use and/or water management responsibilities.

Management agency requirements in the areas of financing, construction, operation, and maintenance of wastewater treatment were very specific in the law. The designated implementing agency or agencies must have adequate authority to carry out the appropriate portion of the approved plan, including the authority to impose land use controls, manage waste treatment works and related facilities, have the capacity to design and construct new treatment works, to operate and maintain new and existing treatment works, and have the financial capacity to build and maintain these facilities required by the approved plan.

After the waste treatment management agencies were designated by the Governor to implement the approved plan for the *Section 208* planning area, grants for construction of publicly-owned treatment works (wastewater treatment facilities) under *Section 201 of Public Law 92-500*, will be made only to the designated agencies for works in conformity with the plan. See also the Regional Planning Council section contained in the Hydrologic Alteration portion of this report.

### 5.3.5 Special Multi-County Districts and Initiatives

Special Multi-County Districts have been established for particular purposes. Several are pertinent to the Estero Bay Watershed.

**The West Coast Inland Navigation District (WCIND)**

Long Range Dredge Material Management Program
Manatee Regulatory Signage Program
Grants Program
Cooperative Assistance

The West Coast Inland Navigation District is composed of four counties: Manatee, Sarasota, Charlotte, and Lee. Its governing board is made up of a county commissioner from each member county, and it has ad valorem taxing authority. Its mission is to maintain the navigation works sponsored by the District, and improve general navigation and boating practices within its member counties. The primary work of the District, the Inland Waterway, enters the NEP at Venice, continues south through Lemon Bay, Gasparilla Sound, Pine Island Sound, and heads east through San Carlos Bay into the Caloosahatchee River.

### Sustainable South Florida

This initiative encompasses the entirety of the South Florida Water Management District. Formed to reverse the collapsing ecosystem of Florida Bay and the Florida Keys, this initiative has focused also on the entire water basin that feeds Lake Okeechobee, or receives water from that Lake. Recently, Sustainable South Florida has created a Southwest Florida Initiative, which encompasses the Estero Bay Watershed.

### The "Arnold" Committee and the Estero Bay Agency for Bay Management (ABM)

The siting of Florida Gulf Coast University contained significant controversy that was only resolved through the formation of a special study committee under the leadership of State Representative Keith Arnold. This committee has finished its assessment and the report has gone to the participating entities.

The next stage of this initiative was the formation of an Agency for Bay Management for Estero Bay, a non-regulatory coordinating group, that is administratively supported by the Southwest Florida Regional Planning Council. The ABM is made up of public and private entities whose first charge is the preparation of a "State of the Bay" report for Estero Bay.

### Charlotte Harbor Ecosystem Management Program

The Florida Department of Environmental Protection has implemented its Ecosystem Management Initiative, which facilitates "place based management" via the use of ecosystem management area (EMA) coordinators and multi-agency teams. Management is tailored to the special needs of each EMA. Estero Bay and Watershed study area falls within three Department of Environmental Protection EMAs, which are included in two separate DEP districts and two separate water management districts. These include the Greater Charlotte Harbor EMA, the Caloosahatchee to Lee Coast EMA, and the Southwest Coast EMA. Teams from ecosystem management areas are assisting in the development of the Charlotte Harbor NEP Comprehensive Conservation and Management Plan (CCMP) through participation in Technical and Citizens Advisory and Management Committees. The Department of Environmental Protection will utilize the CCMP, as well as water management district watershed management plans, in its ecosystem management area efforts in the Estero Bay Watershed..

## 5.3.6 Regional Organizations

### CREW Trust

The CREW Trust was created in 1989 to coordinate the land acquisition, land management, and public use of the 60,000 acre Corkscrew Regional Ecosystem Watershed (CREW) Project. The CREW Project is made up of the largest undisturbed watershed left in Southwest Florida and is

located in southern Lee and Collier Counties. The watershed is managed for maintaining aquifer recharge, water storage, wildlife habitat, and recreation.

## 5.4 Local Government Programs

Local government programs in the Estero Bay Watershed are listed and described in the following sections.

### 5.4.1 Counties, Cities, and Special Districts

There are several types of local governments in Florida. General purpose local government exists in two forms: county governments and incorporated (city/town) governments. Independent, single purpose, special district forms of government exist throughout the state in many forms, the most pervasive being school districts, but water control, fire, library, lighting, mosquito control, are all common.

The most pervasive general purpose government, covering every part of the land mass of Florida is county government. County government has three branches, executive, legislative, and judicial. The executive branch of county government is split, with virtually every county having a separate Sheriff, Clerk of Court, Supervisor of Elections, Property Appraiser, and Tax Collector, as well as a Board of County Commissioners. This diffuse executive branch performs functions as directed by state law.

The legislative branch of every county is the Board of County Commissioners, which exercises the home rule powers of the State Constitution within constraints provided by general law. Some counties have adopted a home rule charter, which gives them certain capacities not provided to counties by general law. This capacity includes being able to restructure the executive branch.

The judicial branch is the county court system, which is subordinate to the judicial system of the state of Florida with its local representation through the circuit court system. The judicial system performs in accordance to general law, as well as the laws enacted by local general purpose local governments.

Incorporated areas, commonly referred to as municipalities, cities, or towns, become incorporated through charters approved by the legislature. General law provides for these procedures and the required content of a charter. Once approved, cities operate according to their charter, which can be amended by the city according to its charter provisions. Under general law, cities have a restricted right to annex additional lands beyond those originally included within a municipal charter. Cities may have combined executive and legislative bodies, or they may be separated, depending upon the provisions of the city charter.

There are also limited purpose special districts that can be enacted through the court system and the most common of these are drainage districts, enacted in accord with *Chapter 298, Florida Statutes*.

A relatively new type of district, the Community Development District (*Chapter 190, Florida Statutes*) was created to provide community services for lands that will be urbanizing, but will not initially be a formal municipality. Such areas are required to have an incorporation referendum when the population reaches a certain threshold. These areas are, however, subject to the general law of the local government of jurisdiction. The Gateway Services District in Lee County is an example of this.

Of special note are the county based districts established through the Natural Resource Conservation Service. These (formerly, in some cases) Soil and Water Conservation Districts work with landowners to establish and implement "best management practices" for land and water users. These districts have elected boards and are active in most counties.

**Local Comprehensive (Growth Management) Plans**

All local governments have the authority to control land use within their boundaries through implementation of their comprehensive plan policies and objectives, and through enforcement of environmental protection ordinances. The development approval process is the primary mechanism that enables local governments to exercise control over consistency with comprehensive plans and land development regulations.

Counties and cities are the ultimate land use regulatory authorities, operating under general law. General law requires plans to be based upon economic assumptions, the most common of which are "growth" assumptions. General law requires the plans to contain the same basic components, and requires that the plans be supported by local "land development" regulations (formerly referred to as zoning, subdivision, and similar regulations). The local comprehensive plan is to be the guide for its growth, development, redevelopment, or at least its rationale for not changing. Land use patterns are summarized in the Land Use Element of the plan. Other components of the comprehensive plan describe activities and infrastructure that also can affect land use. The most pertinent elements of the plan are:

**Land Use Element**: This element summarizes in tabular form and depicts graphically the different land uses of the community at present and projections for the future. It is the visual depiction of the application of the plan's goals, objectives, and policies.

**Housing element**: This element supplements the description of those land uses designated for residential areas and also describes environmental health issues.

**Transportation Element**: Transportation infrastructure is a land use itself and the adequacy and capacity of transportation facilities promotes or inhibits land use densities and intensities. This element describes the existing transportation infrastructure and planned modifications.

**Sanitary Sewer, Solid Waste, Drainage, Potable Water Element**: Utilities are a "land use" and their adequacy helps determine the density and intensity of land uses. This element of the comprehensive plan summarizes the existing utility service areas as well as details the plans for expansion, modification, upgrades, and repairs of those facilities.

**Coastal Zone Element**: This element identifies coastal water dependent uses, and sensitive natural features in the coastal zone, which either promotes or inhibits certain land and water uses.

**Conservation Element**: This element identifies those lands and waters that should have very low intensity or density uses, and should be managed for the sustainability of their environmental features.

**Recreation and Open Space**: This element identifies those lands and waters that are or should be managed for their recreational uses or values.

Local governments provide three basic functions to their citizens:

- Management Services: These services include facility design; master planning; administration; survey of structures; monitoring of water quality; regulatory review, enforcement and programs required for National Pollutant Discharge Elimination System (NPDES) stormwater permits (spill prevention, public awareness, illicit connections, etc.).

- Operation and Maintenance (O&M): O&M includes ditch and pond cleaning, minor repair and replacement of drainage structures, and in some communities may include street sweeping.

- Capital Improvements: These are relatively large services or construction projects that exceed O&M capabilities and are planned five years in advance through the capital improvement element of the Comprehensive Plan.

These three functions allow local governments to provide for flood protection and stormwater pollution prevention/reduction for both existing and future development. Funding has normally been provided through a general fund supported by ad valorem income or gas taxes. State law and regulations now support user fees (i.e., stormwater utility) which provide a dedicated stormwater funding mechanism to provide for all three functions.

A great deal of intergovernmental review and coordination is provided for in the development of local comprehensive plans. In addition to review by the SWRPC, the SFWMD reviews, comments, and provides assistance to local governments in comprehensive plan development. In particular, the SFWMD reviews those elements of each plan most closely related to water resource issues. Table

5-5 lists the water resource issues of local government comprehensive plan elements that are reviewed by the SFWMD. In addition, intergovernmental coordination elements are contained is some local government comprehensive plans and are particularly relevant to water resource management, especially from a watershed perspective.

| **Table 5-5. Elements of local government Comprehensive Plans reviewed by SFWMD.** |
|---|
| **A. Coastal Element** |
| 1. Shoreline use regulation |
| 2. Identification of point and nonpoint sources of estuarine pollution |
| 3. Identification of existing state, regional, and local programs to maintain or improve estuarine water quality |
| 4. Analysis of conflicting shoreline uses |
| 5. Analysis of future land use impact upon vegetation, wetlands, wildlife habitats, and living marine resources |
| 6. Impact of future development upon water quality, circulation patterns, and accumulation of contaminated sediments |
| 7. Identification of actions needed to remedy existing pollution problems |
| **B. Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Recharge Element** |
| 1. Identification and correction of drainage facility deficiencies |
| 2. Coordination of future drainage needs among local governments |
| 3. Protection of the functions of natural drainage features |
| 4. Regulation of land use to enhance water quality of surface water bodies. |
| **C. Conservation Element** |
| 1. Identification of natural resources (rivers, bays, wetlands, etc.) |
| 2. Identification of floodplains |
| 3. Identification of soil conservation problems |
| 4. Identification of fisheries, wildlife, marine habitats, and vegetative communities |
| 5. Identification of known pollution problems and the potential for conservation of each resource |
| 6. Designation of environmentally sensitive lands for local protection |
| 7. Restriction upon land use activities that have an adverse effect |
| **D. Land Use Element** |

| Table 5-5. | Elements of local government Comprehensive Plans reviewed by SFWMD. |
|---|---|
| 1. | Coordination of future development with soil conditions and availability of facilities and services |
| 2. | Protection of natural resources |
| 3. | Discouragement of urban sprawl |
| 4. | Assurance of future utility facility sites |
| 5. | Regulation of development in flood-prone areas |
| 6. | Implementation of minimum levels of service and concurrency |
| 7. | Implementation of drainage and stormwater management |
| 8. | Implementation of wetland protection plans |

### 5.4.2 Lee County

The largest portion of the Estero Bay Watershed is contained within Lee County. The county is approximately 803 square miles in area and has undergone more than a three-fold increase in its population of approximately 105,000 in 1970 to more than 370,000 in 1994.

The executive and legislative body for Lee County is the five member Board of County Commissioners. The County Commission also serves as the County Port Authority, exercising responsibilities for running the county-owned airports, as well as the relatively low level operations at Port Boca Grande and on San Carlos Island. The county recently enacted a Charter, which did not significantly alter its statutorily-provided administrative framework. However, the Charter did require that the County Administrator become the county chief executive officer. The county seat is Fort Myers.

Lee County has an extensively developed administrative and services structure with county agencies for most forms of municipal services, since these services are provided to over 200,000 unincorporated residents. The county also has the necessary public works, community development, natural resource, and transportation agencies which address various issues within the Estero Bay Watershed.

Lee County has issues similar to other fast growing communities in Florida with the additional problem of antiquated subdivisions. The recently enacted Conservation 2020 plan gives the county an additional tool for resource protection.

Lee County government has a number of active divisions which conduct programs associated with environmental issues.

**Water Pollution Control**

*Federal Clean Water Act, Section 402* and *40 CFR part 122* (NPDES) - Lee County submitted Part I of the permit application in June 1995 and Part 2 in June 1996. Permits will also require annual reporting updates, designated water quality maintenance activities and monitoring.
*FAC 62-302* (establishes standards for surface water).

*FAC 62-761 and 62-762* - Lee County is under contract with the FDEP to monitor compliance at facilities regulated by *FAC 62-761* and *62-762*. This consists of an annual compliance inspection, inspection of tank installation or removal, and assistance with discharge reporting.

*Chapter 403 Florida Statutes* - Establishment and administration of a local pollution control program pursuant to the *Florida Air and Water Pollution Control Act, Chapter 403.182 F.S.*

*Lee County Ordinance 90-53* -Surface Water Discharge Ordinance - Prohibits treated wastewater from being discharged to the water of Lee County without permit, and encourages water reuse.

This program includes the following:

- Set up, permit, and monitor discharges to the stormwater conveyance system using Environmental Protection Agency (EPA) standards.
- Monitor water quality for the residents of Lee County, and develop strategies for improvement (110 sites; 1,000 samples tested annually).
- Prepare and submit applications for EPA-National Pollutant Discharge Elimination System Management of Surface Water (MS4) permits.
- Implement MS4 permit requirements (pending review, comments and permit from EPA).
- Education of businesses in proper hazardous waste management policies (newsletters sent to 14,000 businesses, 20 percent assessed annually).
- Inspection and monitoring of pollutant storage tanks, and pollutant discharges to the environment (perform 573 inspections annually).
- Promote soil and water conservation (three hundred requests annually).
- Participate in Estero Bay Study Plan and Charlotte Harbor NEP.

**Groundwater and Wellfield Protection in Lee County**

*Chapter 403 Florida Statutes* - Establishment and administration of a local pollution control program pursuant to the *Florida Air and Water Pollution Control Act, Chapter 403.182 Florida Statutes*

*F.S. 373.302 State Water Resources* - Regulation of Wells - To prevent contamination, it is necessary to regulate the construction, repair, and abandonment of wells).

*FAC 62-520* and I OD-4 Drinking Water Systems - Requires abatement of water pollution and conservation and protection of Florida's natural resources and scenic beauty.

*Lee County Ordinance 91-11*, Lee County Well Code; *SFWMD Rule 40E-3*, Water Wells, *Lee Plan Policies 41.3, 85.1.8 and 85.1.9*; Lee Plan Goal 87; SFWMD Contract C850118

Lee County monitors activities through permitting and inspection of water wells, monitor wells, test borings, foundations holes, elevator shafts and well abandonment (approximately 4,000 inspections completed annually).

- licenses approximately 125 water well contractors, test boring contractors, and monitoring well contractors;
- locates and plugs abandoned wells (variable - approximately 50 per year);
- maintains a computer database of all permits and licenses issued and wells constructed (twenty-five thousand records);
- safeguards public water supplies by establishing protection zones that limit or prohibit use of toxic substances;
- prepares and updates solute transport models;
- monitors facilities within protection zones for evidence of groundwater contamination; and
- manages aquifer recharge projects and well-field protection.

**Hydrological Database and Monitoring in Lee County**

Lee County Surface Water Master Plan, FAC 9J-5;
Lee Plan Objectives *38.1 and 38.3;*
Lee Plan Policies *38.1.1, 38.2.1, 38.3.4, 38.3, 3*

- collects, maintains, and analyzes approximately 200 hydrological monitoring facilities required to calibrate computer models and set control parameters for new developments;
- develops water budgets and disseminates information to the public; and
- installs, maintains, and records data into various databases, GIS, and report formats.

**City of Fort Myers**. Fort Myers is the county's oldest municipality, constitutes the county seat, and is the site for most state and federal district offices. The city's population in 1995 was 46,328 individuals, which is nearly double its 1970 population. The city size covers and area of approximately 30 square miles, which has been increasing as the city continues to annexe unincorporated areas both to the south and east.

The chief legislative body is the five member city council, with the separately elected mayor as the sixth member. Fort Myers operates under the "strong mayor" form of government, which makes the mayor the chief executive officer.

The city has the administrative infrastructure necessary for a mature community. It has a well developed public works system, which provides transportation, water, sewerage, solid waste, and drainage for virtually all of the city. It has a separate community redevelopment agency, a downtown redevelopment authority, and a planning department that also addresses most components of land development not contained within public works. The city's major initiatives are economic development, community redevelopment, and affordable housing.

**Town of Fort Myers Beach**. This town was created in the general election of 1994 through a referendum vote of its citizens. It encompasses the entirety of Estero Island (2.5 square miles), and has an estimated year round population of 6,039.

The town has a four member city commission, with a fifth member running and serving as Mayor. The city is still evolving its services and contracts with public and private entities to meet most of its needs. The city does have a City Manager and Clerk.

### 5.4.3 Collier County

The southeastern portion of the Estero Bay watershed is located within an un-incorporated area of northern Collier County and within the eastern limits of the City of Immokalee. Though the fast-developing, northwestern portion of Collier County abuts the Estero Bay watershed's southwestern boundary, the area of northeastern Collier County within the watershed is comprised primarily of agriculture land and natural areas. Residential and commercial development in the western section of Immokalee are the most densely developed land uses within the Collier County portion of the watershed.

Collier County is governed by a County Commission. Environmental projects pass through a review and approval/disapproval process with the Collier County Environmental Advisory Board before being reviewed by the full Board of Commissioners.

Environmental regulation, management, and planning are vested in several agencies that all report to the County Manager through the Assistant County Manager. Specific Community Development Districts may have specific environmental monitoring and mange responsibilities in large, Collier County developments that abut the Estero Bay watershed, or in future Collier County developments within the watershed. Relevant Collier County organizations include:

**Community Development Service Division**

Permitting, code enforcement, natural resources, pollution control are the responsibilities of this division. Natural resource management concerns such as sea turtle nest monitoring and artificial programs fall within the purview of the Natural Resources Department. The Pollution Control Department specifically deals with pollution, water quality, and hydrogeologic issues. The Community Development Services division coordinates with the Public Works division on relevant issues.

**Public Works Division**

The responsibilities for stormwater, wastewater, water, solid waste management fall under this division. Aquatic plant control in canals and conveyance systems also falls under the auspices of the stormwater division of this department.

**Public Services Division**

Agriculture and Parks and Recreation functions are the responsibility of this Collier County Division.

**Private Databases and Monitoring in Northern Collier County**

There are at least two groups capable of environmental monitoring and data base creation and maintenance in northern Collier County. The National Audubon Society has maintained an ongoing hydrologic monitoring program within the boundaries of its Corkscrew Sanctuary since the 1970's. They currently function in what is primarily a management roll, but they have collected vegetation and wildlife data in the past. The Conservancy of Southwest Florida is a private environmental organization located in Naples. This organization has the ability to collect and maintain data bases as well as perform some monitoring.

## 5.5 Analysis and Effectiveness of Existing Programs

Evaluation matrices for federal agencies, state and regional agencies, and local agencies are shown in Tables 5-6, 5-7, and 5-8, respectively. Each table indicates the level of involvement by each entity with respect to identified watershed activities and issues. The level of government involvement was categorized as follows:

- **Enforcement/Regulation**: By statute or ordinance, an agency has the authority to issue a permit and/or veto a project or activity;

- **Advisory/Review**: By statute, ordinance, or local policy, an agency is required to become aware of a project or activity and make recommendations or comments;

- **Planning/Policy Development**: Through statute, ordinance, or local policy, an agency will establish goals, set guidelines, and develop implementation strategies for activities or projects;

- **Research/Education**: Agencies which contribute research and/or educational information to other agencies and to the general public.

**Table 5-6. Summary of federal government agency involvement in watershed management issues.**

E=Enforcement/Regulation A=Advisory/Review P=Planning/Policy R=Research/Education

| ACTIVITIES AND ISSUES | EPA | FEMA | COE | USGS | FWS | NMFS | CG | NRCS | NEP |
|---|---|---|---|---|---|---|---|---|---|
| **RESOURCE UTILIZATION & MANAGEMENT** | | | | | | | | | |
| Boating/Navigation | | | EP | | | | EPR | | |
| Commercial/Recreational Fishing | | | | | APR | EPR | A | | PR |
| Public Lands/Parks Management | | | | | EPR | A | E | | PR |
| Wetland/Upland Habitats | A | | A | | EPR | A | | | PR |
| Fish & Wildlife | A | | A | | EPR | EPR | | | PR |
| Surface/Groundwater Quality | EPR | | EPR | R | A | A | A | APR | PR |
| Surface/Groundwater Quantity | EPR | | EPR | R | A | | | APR | PR |
| Soil Conservation | A | | EPR | | | | | EPR | PR |
| Pest & Aquatic Weed Control | EPR | | | | A | | | | PR |
| Air Quality | EPR | | | R | | | | | PR |
| Flood Zone | | EPR | EPR | | | | | | |
| **RESOURCE/LAND USE IMPACTS** | | | | | | | | | |
| Dredge and Fill Activities | A | | EPR | | A | A | A | | PR |
| Docks/Moorings/Bulkheads/etc. | A | | EPR | | A | A | AP | | |
| Bridges/Causeways/Roads/etc. | A | | A | | A | A | AP | | |
| Canals/Levees/Salinity Structures | A | | EPR | R | A | A | | | PR |
| Marina Siting | | | A | | A | A | A | | |
| Power Plant Siting | EP | | A | R | A | A | | | |
| Industrial Discharges | EP | | | R | | | E | | PR |
| Domestic Wastewater Discharges | | | | R | | | | | PR |
| Septic Tank Use | | | | R | | | | | PR |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hazardous Waste Disposal | EPR | | | R | | | | | PR |
| Consumptive Water Use | | | | R | | | | | PR |
| Agricultural Runoff | PR | | | R | | | | AR | PR |
| Urban Runoff | EPR | | | R | | | | | PR |
| Development/Public Works | A | EPR | A | | | A | | | PR |
| Mining | EP | | | R | | | | | |

**Table 5-7. Summary of state/regional government agency involvement in watershed management.**

**E=Enforcement/Regulation A=Advisory/Review P=Planning/Policy R=Research/Education**

| ACTIVITIES AND ISSUES | STATE | | | | | | | REGIONAL | |
|---|---|---|---|---|---|---|---|---|---|
| | DACS | DCA | DEP | DOH | DOT | G&FWFC | WCIND | SFWMD | SWRPC |
| **RESOURCE UTILIZATION & MANAGEMENT** | | | | | | | | | |
| Boating/Navigation | | | EPR | EP | | | | | AP |
| Commercial/Recreational Fishing | | | EPR | | | EPR | | | AP |
| Public Lands/Parks Management | | EPR | EPR | | | A | | EPR | AP |
| Wetland/Upland Habitats | APR | AP | EPR | | | | | EAR | AP |
| Fish & Wildlife | | AP | EPR | | | EPR | R | A | AP |
| Surface/Groundwater Quality | | AP | EPR | | | A | | EPR | AP |
| Surface/Groundwater Quantity | | AP | EPR | | | A | | EPR | AP |
| Soil Conservation | EPR | | A | | | | | A | AP |
| Pest & Aquatic Weed Control | AP | | APR | | | | | EPR | AP |
| Air Quality | | | EPR | | | | | | AP |
| Flood Zone | | | | | | | | | AP |
| **RESOURCE/LAND USE IMPACTS** | | | | | | | | | |
| Dredge and Fill Activities | | A | | | | A | P | EP | AP |
| Docks/Moorings/Bulkheads/etc. | | | EPR | | | A | | | AP |
| Bridges/Causeways/Roads/etc. | | A | EPR | | EPR | A | | A | AP |
| Canals/Levees/Salinity Structures | | A | A | | | A | | EPR | AP |
| Marina Siting | | AP | A | | | A | | | AP |
| Power Plant Siting | | AP | A | | | A | | | AP |
| Industrial Discharges | | | EPR | | | | | P | AP |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Domestic Wastewater Discharges | | | EPR | | | | | R | AP |
| Septic Tank Use | | | EPR | EPR | | | | R | |
| Hazardous Waste Disposal | | AP | | | | | | AP | AP |
| Consumptive Water Use | | | EPR | | | | | EPR | AP |
| Agricultural Runoff | | | | | | | | EPR | AP |
| Urban Runoff | | | | | | | | EPR | AP |
| Development/Public Works | | EAP | EPR | | | | | EP | AP |
| Mining | | | EPR | | | A | | AP | AP |

**Table 5-8. Summary of local government agencies and special districts involvement in watershed management.**

E=Enforcement/Regulation A=Advisory/Review P=Planning/Policy R=Research/Education

| ACTIVITIES AND ISSUES | LOCAL | | | | | |
|---|---|---|---|---|---|---|
| | **Lee County** | **Collier County** | **Hendry County** | **City of Ft. Myers** | **Town of Ft. Myers Beach** | **WC&DD** |
| **RESOURCE UTILIZATION & MANAGEMENT** | | | | | | |
| Boating/Navigation | EP | APE | | | | |
| Commercial/Recreational Fishing | E | E | | | | |
| Public Lands/Parks Management | APE | APE | APE | APE | APE | |
| Wetland/Upland Habitats | EP | APE | EP | | | |
| Fish & Wildlife | APE | APE | | | | |
| Surface/Groundwater Quality | APE | APE | EP | | | EP |
| Surface/Groundwater Quantity | APE | APE | EP | | | EP |
| Soil Conservation | | | | | | P |
| Pest & Aquatic Weed Control | EP | EP | EP | | | |
| Air Quality | AE | AE | AE | | | |
| Flood Zone | APE | APE | EP | | | |
| **RESOURCE/LAND USE IMPACTS** | | | | | | |
| Dredge and Fill Activities | APE | APE | | | | |
| Docks/Moorings/Bulkheads/etc. | EP | EP | | | | |
| Bridges/Causeways/Roads/etc. | EP | EP | | | | |
| Canals/Levees/Salinity Structures | EP | EP | | | | |
| Marina Siting | APE | APE | | | | |
| Power Plant Siting | A | A | | | | |
| Industrial Discharges | | | | | | |

| Table 5-8. Summary of local government agencies and special districts involvement in watershed management. | | | | | | |
|---|---|---|---|---|---|---|
| Domestic Wastewater Discharges | | | | | | |
| Septic Tank Use | EP | EP | EP | | | |
| Hazardous Waste Disposal | P | P | P | | | |
| Consumptive Water Use | AP | AP | AP | | | |
| Agricultural Runoff | P | P | P | | | EP |
| Urban Runoff | P | P | P | | | |
| Development/Public Works | EP | EP | EP | | | |
| Mining | APE | APE | EP | | | |

## Enforcement/Regulation

Federal programs have enforcement/regulatory control over most activities except for marina sites, domestic wastewater discharges, septic tank use, consumptive water use, and agricultural runoff. State/regional and local government agencies complement federal programs through their enforcement/regulatory involvement in nearly all areas not enforced or regulated on the federal level. Local agencies cover enforcement and regulatory responsibilities for marina sites. All identified watershed activities and issues have enforcement/regulatory involvement by at least one, and in many cases several, governmental agencies.

## Advisory/Review

Advisory/review responsibilities are well distributed among federal and state/regional governmental units. Areas lacking advisory/review influence at the federal level, conversely, are well represented at the state/regional (e.g., domestic wastewater, consumptive water use, septic tank use), and local (e.g., consumptive water use) levels. Except for habitat and Fish and Wildlife issues, local governments have advisory/review capacity in all identified watershed activities.

## Planning/Policy Development

Federal and state/regional agencies have a comprehensive array of well-established planning programs. Planning/policy involvement by federal and state/regional agency groups occurs in each identified watershed activity and issue. Except for power plant sites, local governments also have planning/policy involvement, but not from a regional perspective. It should be recognized, that comprehensive watershed-wide water resource-related plans developed by federal, state, or regional agencies in some cases may not be implemented effectively at the local level.

## Research/Education

Research and education involvement by federal and state/regional programs exists for nearly all identified activities. Research/education involvement is obviously lacking at the local government level, and is an area that may deserve enhancement if watershed-wide goals for pollution reduction are to be realized.

## 5.6 Summary

The results of this evaluation indicate that federal, state, and regional programs provide a highly consistent, well-conceived array of programs with a balanced degree of involvement in enforcement/regulation, advisory/review, planning/policy, and research/education issues. Most water resource and habitat related watershed-wide programs developed under federal, state, and regional programs are applicable to, and acknowledged by, local governments. However, there are often concerns that improvement may exist in the effective implementation of such programs at the local level. To a great extent resulting a lack of implementation often results from the limited ability of local long-term funding from programs. In addition, this evaluation revealed that research and educational programs are often lacking at the local level and the enhancement of such programs may deserve further examination.